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# THE MICHIGAN FARMER,

## A WEEKLY JOURNAL OF AFFAIRS

### Relating to the Farm, the Garden, and the Household.

NEW SERIES.

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### The Farm.

#### Report of the Joint Committee on Education and Agriculture.

The joint committee on education and agriculture, to whom was referred so much of the Governor's Message as relates to the State Agricultural College, beg leave to report, that in the consideration of this subject they have found but one difficulty to encounter, and that is the confining the necessities of the institution within the present means of the State.

In view of the very general reproach that is heaped upon our present State Constitution, it is gratifying to know that the framers of that instrument were able to comprehend the wants of the State in one particular; that they were able then to see that the security, the wealth, and the honor of the State depended upon the education of the men that were to cultivate the soil; that they comprehended the great fact that labor, in order to be both pleasant and profitable, must be guided by intelligence. And it was in order that the State might be able to provide, so soon as her Legislature should deem it practicable, a place where her young men, whether the children of the rich or the poor could go and by the aid of their own labor, depending upon their own efforts, acquire that knowledge that would enable them to make the best possible use of their labor and their means; that knowledge that would place them beyond and above the necessity of constant toil and drudgery for a meagre, frugal support, and as a consequence of this, place them in a position where, like men engaged in the learned professions, they could devote some portion of their time to the cultivation of the mind.

In accordance with the provisions of the Constitution referred to, the Legislature of 1855 made provisions for the establishment of an Agricultural College. It is not at all

surprising when we consider that this was the first institution of the kind established in America, that it was, in every light in which it could be viewed, an experiment, wholly new and untrod in this country, and forced upon the Legislature by the necessity of the times and to be provided for during the hurry of a forty day's session, that the project was not very thoroughly matured, and consequently that in some respects the hopes of its most sanguine friends have not been fully realized. Some of the errors committed in the outset it is now too late to remedy, yet the institution will be to some extent affected by them for years to come. But it is only necessary to call this to mind in order to avoid, if possible, similar errors in the future.

The institution has been in successful operation now nearly two years, and so far as the limited time it has had will warrant us in forming conclusions, we arrive at the following result:

1. A large majority of the young men that desire the benefits of the school, are the children of parents in ordinary circumstances, and generally those that would be limited to a defective common school education if they could not gain admission to the Agricultural College.

2. There are no immoral or vicious associations surrounding or connected with the College.

3. All boys that go there must move upon a common level. The son of the rich man must put aside his broad-cloth, array himself in his working garb, and meet upon equal terms the poorest boy in the institution, while the poorest boy there is equal to the son of your Governor.

4. The idea that it is degrading to labor, or that it is dishonorable to do anything that it is proper and necessary to do, finds no place there. It is not inculcated, neither is it tolerated. The boys themselves soon learn to respect and value each other in proportion as each shall discharge his whole duty and the reverse.

5. It is found that the labor of the students is performed cheerfully and with a will; that it does not retard the progress of the scholar; that, on the other hand, it adds vigor to the constitution, energy to the mind, health, independence and manliness to the body.

That while the students at other colleges become pale, sickly and diseased in body and mind, and are frequently compelled to leave for want of health, here the result is reversed, and those that enter feeble and sickly become rugged and healthy. In short, we believe the limited experience we have already had is sufficient to indicate the great results that may be expected to flow from the system of combining labor with study upon equal terms.

It seems to have been a part of the plan of the projectors of this Institution that a model farm should be connected with the college, and become part and parcel of the Institution.

But the condition of the land selected for the farm precludes the possibility of any such result for some years at least. In the first place, the forest must be cleared away, and then it will require the slow process of years of labor and decay before it can, by any ordinary or profitable means, be converted into a model farm.

The most that is needed now is suitable buildings and accommodations for the numerous students that are constantly applying for admission from all parts of the State. These the State is abundantly able to furnish, and the tax that would be required for that purpose would scarcely be felt were it not for the demands of our Asylums that have been too long neglected, and are yet unfinished, and the payment of the interest and principal of our State debt.

If the bill now waiting the action of the Senate of the United States shall become a law, it will provide a liberal endowment for our college that will, so soon as the lands can be sold, place it on a footing equal if not superior to the University. Meantime it must receive such support as the enlightened and liberal Representatives of the people of Michigan shall give it. The honor of the State

requires that the experiment should be fairly tried, as much as it requires the payment of our State debt. If successful, as we trust it must be, it will pay back into your treasury, in dollars and cents, all, and more than all, it takes from it, in the increased wealth of the State; while it will pay back in the increased intelligence and noble manhood of her people an amount that it is impossible now to estimate.

It is due to the people of this State, who expect and desire it, that this thing should be fairly tried. It is due to the people of other States that are following our lead in this matter, and who will take courage or despair in the proportion that we falter or progress.

In view, then, of the reasons hastily presented here, and numerous others that your committee have not time to present, we respectfully recommend that a sum be appropriated for the purpose of increasing the accommodations on the farm for additional students, and also to provide for the successful operation of the school and farm for the next two years. The sum we recommend is small compared with the needs of the institution, much smaller than your committee would recommend were it not for the pressing claims of other institutions absolutely needed and already referred to.

For the purpose of carrying into effect the views of the committee upon this subject, they have instructed me to present a bill.

All of which is respectfully submitted.

ALONZO SESSIONS, Chairman.

#### Cultivation of the Potato.

As the season for planting potatoes is approaching, too much attention cannot be given to the preparation of the soil, the selection of the seed, the planting and after culture of this valuable crop. Many persons are surprised that the soil of the United States or Canada does not produce so great a crop of potatoes, as that of Great Britain, Ireland and other European countries. There are several reasons for this deficiency.

The active or vegetable soil of this country is leaf mould, the remains of the foliage of trees which has been accumulating for ages, and is rich in some ingredients and deficient in others, it seldom possesses enough of the silicates and phosphates to impart strength or wiriness to the stem or straw, or vigor and bulk to the bulb or grain of root or cereal crops. The potato rejoices in a dry, rich soil. The land in this country is too wet and cold at one season of the year, and too dry and hot at another. Draining will equalize the temperature, and prevent the soil from baking into impenetrable clods during the heat of summer. It will enable the roots of plants to penetrate the earth in quest of food, and draw up by capillary attraction those silicates and phosphates which sometimes lie far beneath the surface under a weight of stagnant water.

Without draining, and deepening the soil, a very large crop of potatoes cannot be raised. With draining and subsoil plowing across the drains, to the depth of 18 inches, a proper, and timely preparation of the soil, and the application of plenty of well made barn-yard manure, 600 bushels of potatoes can be raised on one acre. This seems a large crop, but it should be remembered that in general the land for a potato crop is only half tilled, and half manured. One thing is certain a large crop cannot be raised without trying to do so.

Select a dry field away from the shelter of trees; land plowed from the green sod, is generally considered best, but I would prefer to have it in tillage for one or two seasons, that the sods may be perfectly decomposed, and the soil consolidated, as it is then not so apt to yield tops instead of tubers. Unless the soil be plowed deep, a large crop cannot be raised. It should be trenched, or plowed and subsoiled to the depth of eighteen inches. The subsoil should not be turned up, but merely softened so that the water can flow through it, and the roots penetrate in search of food.

If much of the cold subsoil be turned up on the surface, it will injure the crop. A little of it may be useful by adding its ingredients to the vegetable mould. If a subsoil plow is not available, a common plow with the mould board removed, following in the wake of the breaking plow and stirring the

soil to the depth of five or six inches, will do good service.

There is little use in trying this plan except in some place where the ground has been thoroughly drained. This work may be performed in the fall, in the spring the ground should be well plowed, harrowed and well pulverized, and drills opened 2 feet 9 inches, or 3 feet asunder. To ensure a large crop, care should be taken to use the best barn-yard manure, produced by cattle fed on roots or other nutritious food. Large potatoes either whole, or cut into three or four parts, are the best that can be used, and care should be taken to get them into the ground before they have sprouted, as nothing exhausts the tubers so much as sprouting before planting.

Some persons assert that small potatoes, or small sets are as good as large ones. I have always found the reverse to be the fact. Large seed are certainly better than small. The best crop I have ever seen was raised from large potatoes cut into strong sets, three or four eyes on each, and the next best was from large potatoes planted whole. The drills in both cases were three feet apart, and the seed fourteen inches asunder in the drills, in both cases the soil was tilled to the depth of eighteen inches, and the manure used was barn-yard dung, the produce of stall fed cattle; it was properly piled, interlined with swamp muck, which absorbs the gases and and liquid manure; turned and mixed before it was used, and saturated with liquid manure before it was put into the drill. When the potatoes were high enough above the surface to denote the position of the drill, the drill harrow or cultivator was used to kill all young weeds and make the soil mellow and friable in preparation for moulding. The last mentioned operation was performed three times, according as the crop required it, twice with the single, and once with the double mould board plow. There was not a weed to be seen. One acre thus managed will produce as much as five acres of land tilled and manured in the ordinary way.

There is scarcely any use in preparing the soil carefully, or managing the manure heap properly, if good seed be not selected. None but the very best of the most approved varieties should be used. Round tubers of long varieties, and long tubers of round varieties are out of shape, and deteriorated and consequently should be rejected. The seed should be true to its kind. The crown of the potato makes the best seed, on this account some potato growers use the crown for seed, and the remainder of the tuber for feeding stock &c. I have planted from time to time, ten acres with seed having only one eye to each set, thirty acres with whole potatoes, and hundreds of acres with seed cut from large potatoes having two, three or four eyes on each set. The seed with one eye produces tubers of a large, and uniform size, but few and far between. The whole tubers produced a large crop, but the tubers were uneven, some were very large, and some very small. The sets cut from large potatoes produced best of all, and where manure and soil and all things are equal, I would be confident of obtaining the most profitable crop from seed of the latter description. When potatoes are dear and seed scarce planting sets with one eye each, is an economical method, for the crown being the best of the tuber, and having several eyes, can be divided into several parts, whilst the rest of the potato can be used for culinary purposes. I have always found the crown set the best part of the tuber for seed. It produces potatoes which ripen earlier and are of better shape, and quality than those which are raised from sets taken from any other part of the tuber. There is a difference of opinion as to the merits of two distinct modes of cultivating the potato, namely *drilling and hilling*, in my opinion the first mentioned is by far the better system, as the greater part of the work can be performed by the plow, and the plants being separated from each other, and having an equal portion of sun, air and soil shoot upwards and strike downwards, spread on every side and produce an abundant crop. Every cultivator of potatoes should procure the best seed even at a very high price. Plant large sets, and always bear in mind that small potatoes are "small potatoes."

To ensure a good crop, the seed must be in the ground early, weeds totally eradicated, and the after culture of the crop attended to with care and exactness.

EDWARD MASON.

#### Work for the Assessors.

The Legislature enacted a law at its late session, which will give to the people of the State some idea of the value of their cereal crops, and the labor expended upon them, but which, after all, will hardly be of much service in pointing out any deficiency of crop, as nothing can be known of the average production. The law, however, will serve as an excellent basis to which future enactments can be added, providing fuller returns, should it be found to work well. There are many subjects connected with the public economy of the State, which would be more useful than the mere number of acres in each crop, but which without that statement could be of little service. For instance, the number of sheep would declare in some degree the weight of the wool, more nearly than the number of acres could possibly be made to approximate to number of bushels of any one crop in a given year, whilst the number of cattle could not be made to state, by any known method, the number which might be estimated as the crop of beef. However, this law is a good beginning, and we hope that every assistance will be given to the officers who have the duty imposed upon them of collecting the statistics provided for in it: An Act to ascertain the annual Cereal Products of the State of Michigan:

SEC. 1. The People of the State of Michigan enact, That it shall be the duty of the Supervisor of each township or district in the several counties of this State, at the time of ascertaining the amount of taxable property, and assessing the same, in his township or district, to ascertain the number of acres of wheat, oats, barley, and corn sown or planted in his district during the year next preceeding, and to return an accurate statement of the same to the County Treasurer of his county, on or before the first day of June in each year.

SEC. 2. The County Treasurer of each county in the State shall report the information thus obtained to the Secretary of State, on or before the fifteenth day of June in each year; and the Secretary of State shall cause a statement of the aggregate number of acres of wheat, oats, barley and corn sown and planted in each township in the several counties, to be published in at least one paper in the State, on or before the first day of July in each year, and cause one copy thereof to be sent to the County Treasurer of each county, and the Supervisor of each township in the State.

#### HOME NOTES.

##### Mangold Wurzel.

Thomas Bain, of Canada West, writes to the *Country Gentleman* that Mangold Wurzel does well with him, after a trial of some years. "They have been found valuable for feeding to milch cows, as they made rich yellow cream, and do not taste the butter as turnips are apt to do. We succeeded in growing them on heavier soil than turnips would do well upon. Some of your subscribers seem to have had no small trouble to get their stock to eat them. We have no difficulty with ours. Everything about the yard is fond of them. Cows, calves, sheep and swine eat them with apparent relish. We feed them regularly to the cows, and a neighbor fed them to his ewes before the lambing season to bring the milk on them, with manifest advantage.

I do not consider them equal to Swedish turnips for laying on fat. They are of a more scouring nature, and require to be fed in small quantities. They have also the advantage over carrots for dairy purposes, in growing on stiffer soil and being easier cultivated. They bear transplanting well, which is convenient to fill vacant spaces in the drills.

##### White feet on Horses.

Sir George Stephen in his "adventures in search of a horse," observes, "a dark hoof is preferable to a white one; the latter is more porous in its structure, and more liable to become dry and brittle. This is easily demonstrated by soaking two hoofs of opposite colors and equal weight, in water: the white hoof will become heavier than the other when saturated with water, and will become dry again far sooner. It is also quite notorious among farriers, that when a horse is lame, the disease is generally found in the white foot. So common is this prepossession against white feet, that I have known instances of the hoof being stained by chancres; but while I admit that a preference is due to the dark hoof I cannot say that I would reject a horse for the want of it."



## Mechanical Properties of the Atmosphere.

BY H. R. SCHETTERLY.

NUMBER ONE.

The atmosphere may be defined as "a spherical shell of air surrounding the earth, extending to an unknown height," and penetrating every pore of every substance on its surface. Even the interstices of living animal and vegetable bodies are filled with air, or some other gas that possesses the same mechanical properties. At the level of the ocean the atmosphere presses upon every square inch of the earth's surface with a weight of about fifteen pounds. It presses in all directions, upwards as well as downwards and sideways; and, if every vacancy in everything were not filled with air or gas, exerting an outward pressure with the same force, many things, and particularly living beings, would be crushed. This fact was first discovered by Torricelli only a few hundred years since, who filled a long glass tube, closed at one end, with quicksilver; and on inverting the tube, with the open end standing in a basin containing quicksilver, he found that that liquid metal ordinarily stood at the height of nearly thirty inches above that in the basin. Hence he justly inferred that the pressure of the atmosphere on the quicksilver in the basin, kept that in the tube up; and on measuring the bore in the tube and weighing the quicksilver in it, a simple calculation showed that the pressure of a column of quicksilver standing thirty inches high and an inch square at the base, would weigh and press with nearly fifteen pounds. Such a tube with a scale of inches and parts of an inch affixed to it, and variously contrived, is called a Barometer, which shows that the pressure of the atmosphere is not always the same at the same place; but ordinarily the variations are between twenty-eight to thirty-one inches.

One hundred cubic inches of air, when the barometer stands at thirty inches, and the thermometer at sixty degrees, weigh thirty and half grains troy; and consequently pure air is then eight hundred and twenty-eight times lighter than pure water; while quicksilver, at sixty degrees, is thirteen and fifty-eight hundredths times heavier than the same measure of water. Hence the pressure of the air on the water in a well having a pump in it, would then force the water in the pump up to the height of nearly thirty-four feet, if the air could be perfectly exhausted out of the pump-stock.

Air is permanently elastic; that is, a very great quantity, as it exists in the atmosphere, may be compressed into a very small space; and when the pressure is removed it will expand again into its former volume. Arnot says, in his Philosophy, that air has been compressed into a fluid state of the consistency of oil; and it is well known that fire may be struck from it in a match syringe.

Again, as the air on the earth's surface is compressed by that which rests upon it, it is manifest that the higher we ascend above the level of the ocean, the less will be the pressure upon a given space, and the more the air will expand; so that on high mountains people can scarcely take enough into their lungs to enable them to exercise actively.—On the plains of Mexico, seven thousand feet above the level of the sea, people's chests are much larger than with us, because they have to expand them so much more than we, to take in air enough; and, accordingly, the consumption is there almost unknown. Hence much exercise of the lungs in singing, laughing, hallooing, etc., is the very best preventive of consumption. Men who constantly labor hard in the open air, from early youth, are much less subject to this disease than students and our modern ladies and delicate men, who confine themselves to heated rooms, afraid to take cold; and the more babies cry the better for them. It has been ascertained by numerous experiments, that, if we assume successive heights in arithmetical progression, the pressure of the air diminishes in geometrical progression, thus: at the height of seven miles its pressure is only one-fourth that at the sea level, at fourteen miles, one-sixteenth, at twenty-one miles, one sixty-fourth as heavy, etc.; and any measure of air taken upwards, expands in the same ratio. Hence it would appear that, as we have the pressure at the level of the sea and the decrease upwards, it would be easy to calculate the height of the atmosphere; but Philosophers differ very much in their calculations.

The air is perfectly invisible when pure, but the vapor (steam) of water floating in it, gives the sky and distant mountains a bluish color. The atmosphere attracts other substances, and is attracted by the earth. Carbonic acid gas, though one half heavier than an equal measure of air, is found mixed with it, even on the highest mountains, and

this is of the utmost importance, for it constitutes the principal food of all vegetables, which can not grow in its absence. So powerfully are the sun's rays attracted by the air that it bends them towards the earth's surface when they fall obliquely upon it. We therefore see the sun in the morning before he has come above the horizon, and in the evening after it has sunk below. If it were not for this glorious adaptation, the refraction of the sun's light, that luminary would burst upon us with all its effulgence at once, in the morning, and leave us in the evening at once in darkness. In other words, there could be no twilight. Again, so delicately is the air balanced, that the slightest whisper sets its particles at once into vibrations; and so greatly are these vibrations modified, by the organs producing them, that an infinite variety of sounds, caused by them, can be distinguished from each other, while certain modifications yield us the most delightful music.

The atoms of air also reflect, that is, throw off light against each other, and it is this property that makes substances around us visible. If light were not reflected by the atoms of air and other substances, the sun would appear as if set in a dark place, seen only while looking at it directly, while all around would be utter darkness. The atmosphere also develops heat from the sun's rays, as is proved by the fact that, the higher we ascend in it the greater is the cold. Hence some have pretended to calculate the cold above the atmosphere from the known decrease of heat upwards, and have stated it at forty-seven degrees below zero; but on this head all is uncertainty.

Though air is softer than the softest downy pillow, yet, when set in motion by electrical changes in the atmosphere, its currents exert a power that no human ingenuity can resist, often throwing down and tearing in pieces the most massive buildings that man erects; and on oceans and lakes storms destroy many millions worth of property and many lives, annually. Lieut. Maury has shown, in his Physical Geography of the Sea, that the great storms of the Atlantic, wherever they originate, rush directly to the Gulf Stream and travel with it across the ocean. This stream is an immense river of warm water, running through the midst of the Atlantic, from the Gulf of Mexico towards the north-western shore of Europe, to warm that part of the world. The effects produced by a few of these storms, called gales, hurricanes, etc., will best illustrate the power of air in motion.

In December, 1853, the new steamer San Francisco sailed from New York for California with a regiment of United States soldiers. While crossing the Gulf Stream she was overtaken by one of these great storms, which swept overboard and drowned one hundred and seventy-nine persons at one blast, and rendered that fine steamer a complete wreck in a short time. One of these storms forced this stream back and piled up the water in the Gulf of Mexico to the height of thirty feet. A ship attempted to ride out the storm, and when it abated found she had cast anchor among the tops of low trees on Elliott's Key. In 1780, a great hurricane commenced at Barbadoes, and tore the bark from the trees, tore up rocks from the bottom of the sea, washed away forts and castles, carried great cannon and men and beasts about in the air, and dashed them to pieces. At different Islands, twenty thousand people were killed on land, and the strongest ships wrecked at sea. In the Patent Office Report for 1855, Prof. Lovering states that, on one occasion a block of mica-schist stone, twenty-eight feet long, five feet thick, and seven feet broad, was lifted and carried to a distance of fifty yards; and on another, a brick wall, consisting of seven thousand brick, was moved nine feet at one end and four feet at the other. These effects the Professor attributes to electricity; and the following may also be attributed to this cause. In 1857, Jan'y 14, a dark body, resembling a monster elephant's trunk, approached the house of John Warren, near Utica, N. Y., swinging to and fro in the air, without a storm accompanying it. He leaped into his cellar with some of his children; his house was lifted from the cellar wall, carried over a plat of grass fifteen feet broad without touching it, and dashed on the ground a complete wreck, every thing broken into small fragments. This body moved on, and tore barns to pieces, leveling forests, orchards, etc., and after a while created a storm. It was no doubt a mass of carbonic acid, which receives a large quantity of electricity into its substance, and when it came in contact with buildings, trees, etc., it discharged a part of its load upon them, and lifted and carried them away by its attraction. If, then, similar effects are produced by electrical action and hurricanes, it is extremely probable that the latter are effects of the former, which

accumulates in particular regions of the atmosphere, and is discharged and put to rest by storms, though the electricity does not show itself on every occasion. If this surmise be correct, we have another of those admirable adaptations which are every where so conspicuous in the Creator's works.

Lastly—water is evaporated, i. e. converted into steam, called vapor, by the sun's rays.—Steam is nearly seventeen hundred times lighter than water, and therefore eight hundred and thirty times lighter than air, for air is only eight hundred and twenty-eight times lighter than water. Steam therefore ascends into the atmosphere and is diffused among its atoms. So long as this steam retains its temperature, it is almost invisible; but when the atmosphere becomes loaded with it, and the steam is cooled by currents of air, it is condensed and forms clouds, which being still more condensed and cooled, precipitate snow in winter and rain in summer, or hail when the cooling and consequent condensation take place very suddenly. Now, from that part of the ocean which lies in the Torrid Zone and is exposed to the uninterrupted rays of the sun, the evaporation is more than half an inch depth of water every day; and the quantity constantly raised by the atmosphere, from the entire surface of the earth, must be enormous; for it is obviously equal to the quantity poured into all the seas and lakes which have no outlet, such as Salt Lake, etc., by all the rivers and streams on earth, and all that falls into those seas and lakes themselves, in addition. The quantity of rain that falls annually has been estimated, and calculated to cover the entire surface of the earth five feet deep. Hence the reader can calculate its weight, and average it per day. I have not time to do it just now. Philosophers have also calculated the power of evaporation that raises water (steam) to the clouds, to be eight hundred times greater than all the water power on earth. But this is not all. Lieut. Maury has demonstrated that the water which supplies the rain and snow of the northern hemispheres is evaporated on the south side of the equator, and vice versa. This, though a startling announcement, is nevertheless based upon numerous facts, one of which only can be stated here. A map of the globe will show that a vastly greater surface of water is exposed to evaporation in the southern than in the northern hemisphere, while nearly all the great rivers, which obviously show the proportional amount evaporated, are in the northern; and experience also shows that more rain falls in the northern than in the southern hemisphere.

Grand Traverse, Mich., Feb. 1859.

## Draining Marsh Land.

We hereto append the report of C. S. Kiersted, of Ulster County, New York, on the drainage of swamp land. This report was made to the N. Y. State Society, and took the premium. The land as described, is so similar to what is met with on a large number of farms in this State, that we think the practice related is applicable in many places where a better system is as yet impracticable.

I have on my farm some eighteen acres of such land, most of it covered with roots and stumps, the surface very soft—cattle or horses could not go upon it, except we had a long drouth, without becoming mired; so I, in company with a gentleman owning lands adjoining me, commenced digging a ditch some half a mile below, with a view of getting a sufficient fall to allow a sufficient depth of ditch to drain our swamp. We dug 110 rods through our swamp, in addition to the long distance below, to get fall at an expense of 28 cents per rod, through the swamp, the first part done by the day; we each paid one half of the expense.

I then went to work and cross-ditched and drained some seven acres, (of which I had realized almost nothing, for the three years I had owned it, previous to this year,) plowed it with a lap furrow, the sward being water grass. After preparing in the usual way, for planting, the most of it, I put a small handful of horse manure in each hill, and covered it with the corn. I put in the horse dung with a view to warm the hill, and the experiment proved very satisfactory; the corn, where I put in the manure, grew so stout, most of it lodged, or went down; it yielded me some 185 bushels ears to the acre.

After preparing and planting to corn the piece mentioned, I took about five acres more, cut a ditch 4½ feet at top, 3 feet deep all around the piece, except the side where the ditch was first dug, then took off the muck, a coarse kind of mud, there was no turf whatever on it—a part of which I put in turnips, a part in cabbage and a part in buckwheat; the yield was very good considering the time I got them in.

Later in the season I took the rest of the lot, ditched that as I did the aforementioned, drew out the roots and stumps, and have plowed the whole lot ready for planting in the spring. It is in most beautiful order, as mellow as ashes, or the most part of it.—Much of the last named piece was covered with red raspberry and other bushes, but I have made clean work of them. I am confident I can raise a large yield of corn next year. The land I would have been glad to have been able to take \$40 per acre for it, but now would not take \$200 per acre.

The expense of ditching, 80 days lower end at 8s. per day, one half I paid,....	\$10 00
To one half of 110 rods at 28 cents.....	15 40
To 430 rods at 20 cents.....	26 00
	\$51 40

I have been in the habit of draining swamps for a number of years when I resided in Greene county, and always met with the best of success, made them the best and most productive of any of my lands.

I like open ditches best, clean them whenever necessary. Swamps composed of peat or muck, should be planted with corn or potatoes at least two successive years, then seed down in fall with about half a bushel of Timothy, keep it in grass but two years, then plant again, use 200 bushels slack lime to the acre; plant two years, then seed again, as before, the longer you work it in this way I think the better. We have thousands of acres of land in the County of Ulster that could be drained and made the most productive of any of our lands.

C. L. KIERSTED.

Kingston, Jan. 10, 1859.

## FARM MISCELLANEA.

## The Rape.

It is well known that the Rape is a kind of Cabbage, that is grown extensively in England and other parts of Europe for its seed from which is expressed a valuable oil. The cake that remains from the oil is used for fattening beasts, and is also ground and the dust used for the top dressing of land, and is found very efficient as a fertilizer. Levi Bartlett of New Hampshire thus writes out his experience with it to the *Homestead* :—

"Having grown this plant for the past five seasons, I will offer a few remarks upon its culture, use, etc. I think it can be of no value in the New England States as a seed, or oil-producing plant, as it will not survive our winters in the open ground. In those sections of the country where the cabbage and turnip can be safely left in the field through the winter, perhaps it might be found a paying branch of farming to grow rape-seed for the purpose of making oil.

It is extensively cultivated in England for the succulent food which its thick fleshy stems and leaves supply to sheep and cows, when other fodder is scarce, and I think it can be profitably grown in the northern sections of the country for feeding milch sows, in our usually dry autumns, when the feed is short in the pastures.

In 1853 I received from the Patent Office a small bag of rape seed. In 1854 sowed a few rows of it about fifteen rods in length; at the same time sowed the balance of the field with Swedish turnips. This was about the 10th of June; August and September were excessively dry, and the turnip and rape plants nearly killed by the myriads of green lice that covered the leaves. In June, 1855, manured, and plowed a piece of smooth sward land, rolled it down smooth, and harrowed it with a kind of horse rake, opened the drills twenty-seven inches apart; strewed superphosphate of lime in the drills, and sowed the seed; the plants came up in a very few days, and were not injured by the small black fly. They were hoed and thinned out so as to stand from two to two and a half feet apart in the drills. This brought it up to sixty-five days from the time the land was plowed. I then cut at the surface of the ground, every other plant on two rods. The lightest plant weighed three pounds four ounces; the heaviest nine and a quarter pounds. This gave a growth of over twenty tons per acre of choice green food for cows, etc., in less than sixty-five days from the time the seed was sown. I then commenced feeding the plants to my cows, till they were all cut, by which time I had a full supply of Early York and other cabbage to feed. I have grown the rape since that is, in 1856-7 and '8—with about as favorable results. I am satisfied we can grow no better plant for feeding milch cows, where the object is to make the greatest amount of butter, and of first rate quality. I presume, however, that cabbage is nearly or quite as good as rape, but rape can be grown in a great deal less time than cabbages.

Last year I grew a plot of corn, planted early in June, for feeding my cows. This was freely fed to them. Occasionally I gave a large wheel-barrow of rape, night and morning, for one or two days. The difference in the quality and quantity of the cream after feeding the cows with rape, was always greatly in favor of the rape, over that of the green corn.

MICHIGAN STOCK REGISTER.  
SHORTHORNS.

Numbers with an "e" following them refer to the English Herdbook—all others refer to the American Herdbook, unless otherwise noted.

- No. 94.—**LADY ATHOL.** Red roan heifer.—Calved April 14, 1858. Bred by Silas Sly & Sons, of Plymouth, Mich. Owned by E. N. Wilcox of Detroit. Dam, Roan Beauty, a cow purchased from and raised by Joseph Haswell of Hooisick, of remarkably good points; by North Star 1941, a bull bred by George Vail of Troy N. Y., by Leopold 869, out of Betty 2d, by North American 116. For Betty 2d see Am. Herdbook p. 205, Vol. 2.
- 1 g. dam, Pride by Redmond 2106, a bull bred by L. F. Allen of Black Rock N. Y. Sired by Duke of Exeter, imported, (10152e), and out of Countess 5th, by Duke 440.
- 2 g. dam, Jenny Lind by Regent 2115, a son of imported Duke of Wellington 55, out of Bellflower by Ajax 2944e.
- 3 g. dam, Nelly Bly, by Nero 111, (4536e).
- 4 g. dam, Nancy, by Bethlehem 1254, a bull sired by imported Young Comet, and from a cow of the Bullock & Cox importation.
- 5 g. dam, — by Comet 1888, imported in 1823 by Messrs. Bullock & Wayne, of Albany, N. Y.
- 6 g. dam, — by Nelson 1914, imported by Cox & Wayne of Albany N. Y., in June 1823.
- 7 g. dam, a cow of the early importation made by Mr. Cox of Rensselaer county, N. Y., and afterwards purchased by Stephen Haswell of Hooisick, N. Y.
- Sire, Duke of Athol 1463, a bull bred by Samuel Thorne of Thornedale, N. Y. Sired by Young Balco 1124, imported by Mr. Thorne from the celebrated herd of J. S. Tangueray, England, and a son of Balco 9918, out of Ellen Gwynne.
- 1 dam of Duke of Athol was imported Lady of Athol, by Duke of Athol 445, (10150e), a bull bred by Thomas Bates of Kirkcubright, Eng., and sold by his executors to L. Spencer of Westchester, N. Y. For Lady Athol see Am. Herd Book page 455, Vol. 8.

[The quality and growth of this heifer indicates the excellence of its breeding, and it promises to be large in size, and excellent in proportion. It is the design of Mr. Wilcox to breed her to Orpheus the coming season.—Ed.]

For several years previous to 1855 I was greatly troubled with the "small black fly," in its destroying the cabbage and turnip plants, while in the seed leaf. For previous to that I had always attempted to grow them on old, and finely pulverized ground, and generally what of the plants the fly spared were mostly ruined by clump-foot or fingers and toes.

Since I have adopted the plan of growing rape, cabbages and turnips, on inverted sod land, the plants have scarcely been injured by the turnip fly, cut worm or fingers and toes, nor have I failed of growing good crops. Perhaps other farmers might succeed equally well if they would pursue a similar course.

## The Wendell Seedling Potato.

C. Blakely of Bristol, Connecticut, has been cultivating successfully an early variety of the potato, called Wendell's Seedling. He claims that it has done better than any other variety he has heretofore tried. He says, what we have noticed to be true, that as a general rule, only about fifty or sixty bushels of marketable potatoes have been raised by him with other early sorts, when cultivated on the ordinary plan. Of Wendell's he raised last year 119 bushels from 72 rods of ground or at the rate of 264 bushels per acre; but as other kinds also did better than usual, with the same treatment he recites his mode of culture to be as follows: a piece of old meadow land that only produced about a ton per acre, was selected after the hay was cut in 1857, and turned over flat, and moderately manured with a compost of dissolved lime, ashes, salt, plaster, night soil and muck. A fair crop of turnips was taken that year. Marsh muck was hauled into the cow yard and mixed with the manure at the rate of three fourths muck and one fourth manure. Early in the spring, the ground was again plowed, harrowed and furrowed three feet and a half one way. Every twenty inches a shovel full of the compost was put in the furrow, and the seed set on it. Both were then covered with the plow, and when the potatoes were just about showing themselves above ground, the whole ground was harrowed till it was quite mellow, and the drills thus made flat. There were three bushels of seed used on the seventy two rods of land thus treated.

## Leaks Simply Stopped.

The *Lynn News* says:—"Some years ago I had a leaking 'L.' Every northeast storm drove its waters in. I made a composition of four pounds of resin, one pint linseed oil, and one ounce red lead, applied it hot with a brush to the part where the 'L.' was joined to the main house. It has never leaked since. I then recommended the composition to my neighbor, who had a dormer window which leaked badly. He applied it, and the leak stopped. I made my water cask tight by this composition, and have recommended it for chimneys, etc., and it has always proved a cure for a leak."

## Corn and Potatoes.

E. P. Barnes of Pharsalia, writes to the *Genesee Farmer* that he tried last year the experiment of planting corn and potatoes in the hill growing the two crops together.—The crop of corn raised was an average one, or as good as those of his neighbors raised without the potatoes. The potatoes raised were excellent. They were dug soon after cutting up the corn.



## The Garden & Orchard.

### The Apple Tree Bark Louse.

Whilst visiting an orchard some days since, situated a few miles outside the city, we had our attention directed to the fact that a number of the young trees were affected with the bark louse. The little brown scales covered the branches, and the case looked rather hopeless. Nevertheless, this enemy of the apple can be conquered if taken in hand with a little knowledge of the habits of the insect.

In the first place, it must be understood that the scale, or shell, which we see adhering with wonderful tenacity to the bark, and which seems almost to be a portion of the growth of the tree, is not really the insect, it is but the covering of the gravid female of last year, and underneath it is a nest of eggs, sometimes yielding, according to Dr. Asa Fitch, as many as 102 in number, and sometimes down as low as thirteen only. These eggs are hatched out under the shell into minute maggots, and about the beginning of June they may be seen in countless numbers all over the young bark, like yellow white dots, and undoubtedly then feeding on the juices of the tree and hindering its growth. This insect has not yet been reported upon in its more adult stages. But this much being known, it points out how it may be combated with some degree of success. In volume 13 of the MICHIGAN FARMER, page 82, will be found the method which A. G. Hanford, of Kenosha, Wis., pursued with trees that were thus affected.

From the habit of the insect as recited above, it is evident that any attempt to destroy it at any other season than just at the time or previous to the larva issuing from under the scale, will be useless, and possibly injurious to the tree; and as it is the design to save the tree in as healthy a condition as possible, how to attack the insect and keep the tree in a healthy condition is the problem.

In the first place as it is evident that every portion of the tree attacked must be reached with some wash or compound which will affect the young insect as it issues from the shell, it is necessary to prune off every useless branch, and also all that cannot readily be reached. The branches pruned off should immediately be burned to ashes, and not a single shoot left. With the tree thus shortened in so that it can be reached, about the first of June, a paint is prepared, composed of leaf tobacco boiled in strong lye till it is reduced to a complete pulp, and the whole mixed with soft soap made cold; this compound is applied with a paint brush to every part of the tree, where there is the least sign of the insect. This tobacco combined with the lye in some degree resisted the influence of the rains, and was not readily washed off, and was found at the same time an effectual protection.

Mr. Hanford used a paint, about the same season, made of tar and linseed oil, which stuck to the tree during the season of the hatching out of the larvæ of the bark louse, but afterwards cracked and peeled off, bringing the scales with it, without endangering the tree. But the trees also had to be trimmed, and shortened in, so that the paint brush could reach them in every part.

### Practice with the Pear.

MR. EDITOR:—I have read recently with great interest the several articles on the history and the culture of pear, which you have published, and in response to the invitation of Professor J. C. Holmes, which I noted in the number for January 29, requesting some of his amateur friends to communicate their experience with the pear in the vicinity of Detroit, I herewith send you mine, hoping it will not trespass on your patience. I hope also that others will respond to the invitation, so that whilst giving mine, I may have the benefit of the observation of others who are engaged in fruit culture.

It is eight years since I bought two standard pear trees, a White Doyenne and a Bezi de la Motte, and planted them on sandy loam. Most of my trees do better on sand than on clay, owing probably to the subsoil when clay being too wet. These two trees are now fifteen feet in height, and seven inches in diameter. They have borne five years in succession, and the year before last the White Doyenne yielded three bushels, which sold on an average at three dollars per bushel. The Bezi de la Motte is a good bearer, but not so profuse as the other so far. I have supplied these trees well with such manures as I thought would be acceptable to them, principally bones and ashes, but only within the past two or three years.

I have, in all, now set out nearly one hundred pear trees, but have only about fifty of them left, the rest having failed to grow when set out. From my experience with them, I am satisfied that young pear trees require more care in their removal and setting out than is generally accorded to them. But the chief cause of my loss was the severe winters of 1856-7. Its effects were well worthy of note, and I think may show that there is after all no just cause for being discouraged with the cultivation of the pear, from occasional failures. My trees were of different ages from transplanting, some being set out five years and others from one year up to four. Of those that were set out two years at the time of that winter, nearly all died, and unfortunately I had a considerable number of that age; of those that were older and younger, though a few were injured, yet they mostly lived and escaped without any material injury. The reason seemed to me, that the older trees had got well hardened with age, and the yearlings had not made their new growth, whilst those set out the year before, having got established, had made a rank growth of wood, which was immature, and was unable to resist the effects of the severe winter. With this exception, I consider that my efforts to establish a pear orchard have been successful.

All my trees are standards, and I have found the White Doyenne, Flemish Beauty, Beurre d'Arenberg, Bloodgood, Dearborn's Seedling, Buffum, Steven's Genesee, Bezi de la Motte, Tyson, and St. Ghislain, to be hardy and good pears for this part of Michigan. These varieties have done well with me. The Dunmore and Knight's Monarch, winter pears, are doing pretty well. The Dunmore got killed to within a foot of the ground, but I happened to let it stand, and it now bids fair to make a fine tree. Being a mere beginner, I made the mistake of digging up all those that were killed, and did not allow them a chance to recover, which I ought to have done, for of three that were left, a Seckel, a Jargonello and a Dunmore, all have since done well, and I now feel certain I might have saved more.

THOMAS BLACKETT.

Roseville, Macomb Co., Mich.

[It is hoped that others who have had experience will respond to the above request. This experience of Mr. Blackett is just such information as all want to know, and is always welcome. The climate and soils of Michigan require to be known better, and as we gain this knowledge, we shall be better able to take advantage of them. Let us have more of just such communications, on all subjects connected with fruit, with crops, with stock, and everything that pertains to the garden, the farm and the household.—They will always be welcome.]

### Fruits at New Orleans.

A correspondent writing to the *Connecticut Homestead* from New Orleans thus speaks of the fruit in that section, and gives us a more hopeful account than any we have heretofore seen.

"The nurseryman, here, has a very great advantage over one in the North. His autumn sales run into those of Spring, and there is none of that intense pressure which is felt in November and April with us. One can make plantations here in all the winter months. The gentleman who is most largely engaged in this business, has a nursery of some fifteen acres out on the Metairie Ridge, and has Texas, Mississippi, and Alabama, for a market, besides his own State, and yet his sales do not exceed ten thousand dollars annually. The price of trees and shrubs too range considerably higher than at the North, and many things are more than doubled. Thus, Hovey's Seedling strawberry which has for years been retailed at a dollar a hundred, sells here for four. Raspberries, at the North a dollar a dozen, sell here for fifty cents each. Apple trees, two years old, fifty cents, and pears of the same age one dollar. Yet the business with all the disadvantages of high prices, in which the dealers stand very much in their own light, is gradually increasing as the people gain information by travel, and by reading upon horticultural topics. Anglo Saxons are coming in more and more, both from the North and from the mother country, and are building houses in the suburbs of the city, and locating upon the plantations. The first desire is to surround themselves with the fruits and flowers to which they have been accustomed, and with those which are more congenial to the soil and climate.

From what I have seen of the fruits and fruit trees here in this unfavorable season, and from what I have learned from intelligent gentlemen, I have formed a very high opinion of the pomological resources of this region. There are a few things that will not flourish, as currants, gooseberries, raspberries. The Summer is entirely too hot. The blackberry however grows wild, and does well in garden

cultivation. The Strawberry matures earlier than with us, and continues much longer in bearing. The varieties in general cultivation are not as numerous as with us. If there could be a weekly exhibition of this and other small fruits in this city, it would very soon put fruit growing upon a new basis. But any such concerted action for the public good is probably somewhat in the future.

It was formerly thought that apples and pears would not succeed here, but more recent experiments have demonstrated that they are both adapted to the soil and climate. The public are not a little indebted to John Hebron, Esq., of Lagrange nursery, near Vicksburg, Miss., for this knowledge. He has been gradually drawn into the cultivation of trees for sale, by meeting the demands of his friends and neighbors, occasioned by his own success in fruit growing. He has now some ten acres in a pear orchard in which he grows fruit for market. The favorite varieties are the Bartlett and the Beurre Diel. They are sold in Chicago, St. Louis, in this city, and in Havana. From one thousand trees, he realized last year twenty thousand dollars. They are picked before fully ripe, carefully handled, and reach market in good condition. The trees come into bearing earlier than with us, and grow to a larger size. The quality is said to be fully equal to the same varieties in a northern climate.

There is like progress in the cultivation of apples. There is no longer a complaint among those who try to cultivate them, of a want of Winter and Summer varieties. The great difficulty in keeping apples in a warm latitude is, that they generally ripen before cold weather sets in. Apples that ripen in the northern states in October and November, will mature in the South, in July and August. Seedlings raised down here are better adapted to the climate, and fruit growers have now a respectable list that ripen late, and keep well in Winter. *Spark's Late*, *Golden Pippin*, *Shockly*, *Marshall County*, *Mississippi Winter Sweet*, *Bacolimus*, *Buff*, and *Mangora* are among the best winter varieties. The last three are from Georgia, a state that is making rapid progress in pomology.

Plums will not pay for planting in this region, but peaches are much more at home than at the North. The climate is more congenial, and nothing can exceed the beauty and flavor of this delicious fruit in the South. If it should run out entirely at the North, as many fear, we shall be able to drain unlimited supplies from the Southern Atlantic States. The New York market was a good deal affected by southern supplies of this fruit last season, and the production in the Carolinas and Georgia will be likely to increase, as the orchards of New Jersey and Delaware fail. Among the best varieties for this climate are the *Bellegarde*, the *Early York*, *George IV*, *Royal George*, *St. John*, *Yellow*, *St. Stephen*, and *Tillotson's Early*.

Apricots and nectarines do well in the South, much better than with us. All these fruits are beginning to blossom in sheltered positions at this date, and will soon be out in their spring array.

Grape culture hardly keeps pace with the other fruits. The soil is so wet in all this region that nothing but the *Scuppernon* will flourish without draining. If the land could be properly drained, there is little doubt that many of the varieties cultivated under glass at the North, would flourish in open culture here. Some twenty varieties of foreign grapes are to be found at the nurseries, but I have not yet seen any planted that looked vigorous. The *Isabella* is worthless here, the *Catawba* does pretty well, and the newer varieties for open culture at the North, are not yet tested. I shall have to reserve what I have to say upon fruits of tropical origin until my next.

AGRICOLA.

### HORTICULTURAL NOTES.

#### The Time to Prune.

Chas. W. Macomber, of East Marshfield, Massachusetts writes to the *Boston Cultivator* that he has been compelled by experience to the conclusion that the most proper time to prune apple or other trees, is in summer. His statement is:

"It was in pursuance of a desire to ascertain whether we were doing the best we could for our orchards, as to the time of pruning, that some ten years ago, I commenced a series of experiments in a small way at other seasons of the year—in early winter, in March, April and May. Neither of these seasons proved to be better than that now so usually taken, even where every precaution was taken to prevent the waste of the sap. But upon carrying experiments into July (the season of all others into which labors press the hardest), it was found that the wounds healed readily. Indeed, without making any pretensions to infallibility, I venture to assert that from the middle of June to first of August, is the most favorable time to prune apple orchards, as regards the speedy healing over of wounds.

"The writer cannot doubt that he has injured two of his orchards very much by a long-continued course of winter and spring pruning. It has been found impossible in some instances to prevent the wounds then made from flowing sap—it would burst off paint, shellac, and anything else I have ever known to be tried to prevent its escape. And in some cases, I have known it to continue to flow for two or even more years, and until the trees had become diseased. In other cases, where the

sap did not continue to flow into the second year, the trees presented an unhealthy, stained appearance, where the sap has flown down their trunks, leaving an unsightly black coating upon the outer bark. And all this disease has come from pruning in the wrong time—i. e. in the winter and spring.

Therefore, I cannot but wish our friends to profit by my experience, even although it has been costly and opposed to the long practice, and until lately, the fixed belief of the farming community."

#### Seedling Raspberries and Blackberries.

An inquirer wants to know how he can raise seedling raspberries and blackberries. His only plan is to save the choicest fruit on the stem of the bush from which he wishes to take the seed, and let it get fully ripe. Then make a good bed of rich loam, in a place where there will be some shade, and sow the berries in rows or otherwise, as you would other seed. A shaded place is most natural to the plant.

#### A Suggestion.

A writer in the *Iowa Northwestern Farmer*, advises those who want melons and other choice plants started early, to scoop out a turnip, and fill the hollow with the choicest old leaf soil, in which plant the seeds. These when thus started growing may be set out turnip and all, without being disturbed, and as the turnip will soon decay when set in the soil, it is no preventive to the spread of the roots, but on the contrary is a benefit.

#### Fruit Spur Grafting.

Hovey in his *Magazine of Horticulture* proves that the new method of grafting fruit spurs on trees not yet in bearing, or for the purpose of obtaining fruits of new sorts at an early date, is not new, and was not first practiced by the French fruit growers. On the contrary he proves that he practiced it in 1844, having learned the method and its effect from the late Capt. Lovett of Beverly, the year previous; this gentleman having practiced it for several years previous, and with the same results as shown to be its effect in the article we published a few weeks since, taken from the *Gardener's Chronicle*, written by Dr. Lindley. This shows that in some matters in fruit growing we are ahead of the continental folks, smart as they think themselves.

#### A Grape Vine Calendar.

In Hovey's *Magazine of Horticulture*, we find a grape vine calendar, which we copy. It was written by Col. D. S. Dewey of Hartford, an experienced amateur and though his practice may militate with some of the notions now prevalent, we incline to think with him, that there is no harm in making a trial of the fall pruning he commends. The calendar is made out for latitude 42, and will suit us as well as Connecticut.

APRIL—early—uncover vines, and leave unil late in the month, when the canes may be spread apart, and partially erected.

MAY—say middle—tie up to trellis, arbor, stake, or building, and, at the same time, disbud, i. e. remove superfluous shoots, which will now be from two to four inches long.

JUNE—at intervals—water freely with liquid manure, or "sandy" water, or with both alternately, and syringe often, towards evening, with pure soft water.

JULY—early—thin fruit; water soil and syringe foliage, as in June.

AUGUST—say first—mulch; water and syringe according to weather.

SEPTEMBER—say first—shorten in all fruit-bearing shoots about one quarter. (Opinions differ; try it and satisfy yourself, one way or the other.)

OCTOBER—before hard frosts—gather fruit at mid-day, when perfectly dry. (Delaware and Hartford Prolific may be gathered in September.)

NOVEMBER—late, (about Thanksgiving)—prune and lay down, when vines are not too large, and protect with some kind of slight covering. (To be nice about it—if boards are laid on the ground, then the canes gently bent down, some near to, and some upon the boards, and then evergreen boughs laid over all; both root and branch will be benefited, and additional satisfaction be attained, especially in latitude north of 42°.)

DECEMBER, JAN., FEB. AND MARCH—let alone—unless it is a "matter of conscience" to prune in mid-winter, or very early spring.

#### The Ontario Grape.

This is a new candidate in favor, which has been found growing on the South bank of Lake Ontario. Clusters are represented to be large, and berries the same, "round, black, thin skin and buttery."

#### Hybridizing the Rose.

It is not an easy matter to hybridize the rose especially where the female parent is a double or full flower, for the anthers to be removed not only lie scattered about under the petals, but many of them are often upon very short filaments, and buried deep within the cup or annular cavity at the top of the fruit receptacle, and are closely packed about the base of the numerous pistils. The flower cannot be considered as properly prepared for impregnation until every anther is removed, and though this may be a tedious task in many instances, it is nevertheless richly remunerative to the patient and skillful operator.

The following mode of proceeding I have practiced for some years and with excellent results with the rose and other flowers. I may remark here that my professional engagements allow me but a brief time each day to devote to the garden, and from fifteen to twenty minutes in the morning is all that is required for the whole performance of the hybridizing experiment. The anthers having been removed from the flowers, the pollen-bearing flower is inverted and spread over it, and they are tied fast together by woolen yarn, and in such position that when the pollen is ripe it will fall on the pistils below; and this will happen generally at about the right time for fecundation. The inverted flower acts as a cover and protection against insects and floating pollen. The flowers may be left in this state for a day or two, and they may then be separated. Every flower thus manipulated should have some label or mark attached to its stem, by which the impregnating flower should be known. This plan of operation may be adopted in doors or out, but the principal part of my own experiments have been made in the greenhouse.—PROP. PAGE, in *Hovey's Magazine*.

#### The Elder Bush a Preventive of Bugs.

It is not known to many persons that the com-

mon elder bush of our country is a great safeguard against the devastations of bugs. If any one will notice, it will be found that worms or insects never touch the elder. This fact was the initial-point of experiments of an Englishman in 1694, and he communicated the results of his experiments to a London magazine. Accident exhumed his old work, and a Kentucky correspondent last year communicated to the *Dollar Newspaper* a copy of the practical results as asserted by the English experimenter: that the leaves of the elder, scattered over cabbage, cucumbers, squashes, and other plants subject to the ravages of insects, effectually shields them. The plum and other fruits subject to the ravages of insects, may be saved by placing on the branches and through the tree bunches of elder leaves.—*Herkimer Journal*.

### Bees and their Treatment.

Mr. Nelson Palmer, of Camden, in Hillsdale county, writes us that he has kept bees ever since he has lived where he now resides, or for a period of fourteen years, and that he has found it during that period a profitable business, besides affording to the family a luxury that no one need be ashamed to set before his friends when they come to see him. He commenced in the spring of 1845, with one hive, and then he had honey to use in the fall, and since that time he has always had honey to use, and a large amount for sale.—He continues: "I have also sold quite a number of swarms; but have never kept an account till the spring of 1858. Then I found that my apiary had thirty hives, and this spring I have thirty-five, showing an increase, after selling of box honey six hundred and forty pounds weight, at the rate of one shilling per pound, in the village of Hillsdale.—I find that my bees return me at the rate of more than fifty per cent. for the capital invested in them and the amount spent for labor in taking care of them. What better investment can any one make?"

The above indicates what return bees can make when taken care of. Mr. Palmer, it is very evident, attended to them as he would have done to other valuable stock. He undoubtedly watched that his hives were kept in a healthy condition, and that as the season commenced, they had all the facilities they needed for going to work.

One of the plans adopted to facilitate the labors of the bees, and to get them started at work early, is to feed them with what they most need. It is well known that as soon as the temperature of spring is sufficiently warm, the inhabitants of the hive immediately commence the work of propagating their kind. The mere laying of the eggs is done by the queen bee, and is known to commence as soon as the workers have got combs ready. Observers have noted that the eggs remain in the cells three days before being hatched out, but at the end of that period the larvæ appear, and immediately require food. As it is well known that the eggs, when laid, will not hatch out unless there is a certain degree of heat in the hive, the animal heat is presumed to be promoted by a supply of food, and with it the temperature of the hive is kept up to hatching heat. This period is therefore considered a very important one to the bee keeper, because if he can supply artificially to the bees the food they need to feed to their young, their activity tends to keep up the hive at hatching temperature, and the consumption of the food has probably the same tendency. Without heat, also, the young bee, while in the larvæ state, cannot perform its functions. If the temperature and food is sufficient, the larvæ will only require to be fed for four days, but if both these are deficient, the time of the larvæ state is lengthened to six or seven days, and it may be questioned even then if a want of food has not the same effect on the bee it has on other animals.—After passing from the larvæ stage of its existence into the chrysalid state, the bee needs no food, but is found in about twenty days from the time the eggs are laid to become the perfect insect. Many bee keepers, to gain time, deem it of some importance to have a large number of young bees hatched out early in the season, because then the hive is so much strengthened, and increased, that when honey is ready to be gathered, there are not only a large additional number ready to go to work, but there are also sufficient to take care of the young bees that are constantly coming forward to be fed and attended to. Most of the beekeepers we are acquainted with, consider this early preparation of the hive, by giving the bees at an early season material from which bee bread can be extracted or gathered, as important. Honey or syrup does not seem to supply the kind of food wanted, but it has been found by a number of apiarists, that unbolted rye meal will supply it, and it has been used with success. With the meal should also be given a supply of water. Mr. Rood, of this city, who has kept a large number of swarms for many years, stated that this was the plan he adopted to bring out a weak swarm strong in the spring, and it is worthy of a trial.



## FOREIGN AGRICULTURE.

## Rearing of Cattle.

FROM THE LONDON FARMER'S MAGAZINE.

In Great Britain, where animal food enters so very largely into the general consumption of the inhabitants, no part of the economy of farming demands a more earnest attention than the rearing and fattening of the animals that are used for that purpose. A detailed statement of the most approved mode of managing cattle may not be unserviceable.

The calving season commences in January, and continues till June, the earliest dropped calves being always the best, and maintaining a superiority throughout the season. So soon as it is dropped, the calf is rubbed dry with straw in hand; an egg is crushed and passed down its throat, and it is carried to a single apartment, in which it lies undisturbed for some hours. In the meantime, the teats of the cow are stripped by the fingers of the hand, in order to discharge the first milk, which is reckoned to be unwholesome. The calf is then introduced and sucks a moderate quantity, and is again returned to its apartment. The sucking is performed thrice a-day: at six o'clock in the morning, at noon, and at six in the evening. The cow-house and the calf-pens are adjoining, and afford convenience by that position. The calf is led by a rope or halter on the head, and when it is sucking, the end of the rope slung longitudinally for that purpose behind the cow. Two calves suck one cow, and are placed one on each side.

So soon as the calf is able to chew with its mouth and to masticate, bruised oil cake is placed in a box in a corner of the apartment, which food the animal very soon learns to chew, and it has a very nourishing effect. Another box contains a lump of chalk, which the animal licks, and it is found to be very useful in correcting the crude acidities of the stomach. A rack is placed on the sub-division of the apartments, and in it are placed clover and vetches, which the animal soon learns to eat. One rack thus serves two calves.

The calf continues to be fed and suckled in this manner for three months at least, when it will be grown strong and fit to be removed to an adjoining grass paddock, which must be rich in pasture, well sheltered, and provided with a regular and ample supply of fresh water, and a roomy shelter-shed. An orchard suits well for this purpose, the shade of the trees is grateful and the grass is tender for the young animals under the shade of the trees. At the end of sixteen weeks the milk is gradually withdrawn, and if the grass in the paddock be scanty, cut clovers and vetches must be given daily in racks, and in a fresh state. The shelter-shed must be well littered and kept dry.

Sucking the dam is very much preferable to giving the milk to the calves by hand from the pail; for by exposure the volatile gases of the milk escape; and in the process of sucking a quantity of saliva is engendered, which is necessary for the proper digestion of the milk, and for the secretion of nutritious juices. The appearance of the animal at once shows the great difference of the two ways of rearing; the suckled calf being very sleek in the coat, light in the offal, and of a thriving and animated appearance. The animal that is fed by hand is heavier in the paunch, slower in growth, and of a generally more unthrifty appearance.

By the month of July the earliest calves will be able to be removed from the weaning paddock to the pasture field, which must be rich and well sheltered and watered. They remain there till the end of October, when they are removed to the farm yards, where they are put into yards provided with shelter yards, and about six or eight animals in each yard, into which fresh straw is put daily, and the feeding crib is frequently moved from place to place in order that the dung may be equally made, and get the same trampling and consolidation in every part of the yard. Fresh tops of turnips are given them to eat daily; and in the early winter the tops of mangol wurtzel are added. The smallest sized turnips go with the tops, and form the food of the animal during the first winter, when the teeth are weak and the mouth is delicate.

In the first part of the month of May the grass is generally sufficiently grown to afford a bite to pasturing animals, and at that time the young cattle, now about one year old, are removed to the pasture-fields, which must be well fenced and provided with a shelter-shed and an ample and constant supply of fresh water. The gates and fences must be made very secure and impenetrable, that no damage may happen to the cattle in trying to escape by leaping the fences, or effecting a passage in any way. The shelter-shed, large and

roomy, is an indispensable requisite for the purpose of protecting the animals against the scorching heats of noon-day and the cold storms of wind and rain that occur in autumn and in the early part of winter. No part of pasturing economy is more necessary.

About the end of the month of October the declension of the herbage and the increasing inclemency of the season render it necessary to house cattle, and they are removed from the fields to the farm yards, and there arranged for the winter in smaller lots than during the last winter, as the size of the animals has increased: six or eight beasts are sufficient in one yard. Fresh straw is given them daily in a wooden crib, latticed in the sides and bottom, and frequently moved from place to place. The mouths of the animals being now strong the bulbs of the turnips are given to them to eat, the tops and roots being cut off before they are removed from the field where they have grown. This operation is performed by a sharp sickle in the hands of persons employed for the purpose. Longitudinal cribs, made of latticed planks of wood, are placed in the yards, in which the turnips are laid every morning by break of day, and where the cattle eat them undisturbed. The mud and filth are very carefully removed by the shovel every morning before the fresh turnips are deposited. The eating of the roots is finished by the time when darkness sets in, which prevents any accidents happening to the animals, from choking or hoving during the night. The water is supplied to each yard in cast-iron troughs, which are fed by pipes, with ball-cocks, leading from higher ground, or from elevated casks, to which the water is raised by a force pump. One trough of five or six feet in length supplies two yards, by being placed across the subdivision walls. The troughs require to be cleaned out occasionally, in order to remove the earthy sediment that falls to the bottom. This purpose is effected by a plug hole in the end of the trough, by which the watery sediment escapes, to which it is driven by a brush in the hand, and assisted by the trough being placed with a gentle inclination to the end which contains the plug-hole. The troughs are most convenient when the sides are shelving.

The young cattle are treated yearly in the manner above described, till the third winter, when the animals will be three years and a half old; and then the fattening process commences. The animals are arranged by the first of November in the feeding-yards, in lots of two, and not more than four together; it being a universal rule that, the smaller the number of animals that feed together, the better they thrive. Accordingly, many most eminent writers have recommended, and many very eminent practitioners have adopted, the mode of confining the animal "singly;" but the most general practice is, two or four together. The yards must be dry, have a good shelter-shed, and a regular supply of water. Cattle eating turnips *ad libitum* do not drink much water; but it is better that they have the liberty of taking or refusing it. In these yards the cattle are supplied daily with fresh turnips, and in quantity as many as they can consume, so as not to leave any part to be wasted or reduced to a loss. Fresh straw and hay are given daily in the cribs. In the spring, in February and March, one feed of oil-cake is given daily, which hastens the process of fattening, and improves the quality of the animal. The space of three months may be stated, at a general calculation, as the time required to render an animal that is treated in the above manner fat or fit to be slaughtered. But very much, if not all, depends on the grazing state of the animal; for, if it comes from the pasture-field to the feeding-yard in a "lean" state, double the above mentioned time will be required to bring the animal into even a medium state of maturity. Hence arises the necessity of keeping the animals "always" in a forward, fresh condition during the years of their early growth. When a more ample supply of food is given to an animal in this state, the fattening process commences immediately, because, all the parts of the body being kept in a full state an instant readiness is afforded to the accumulation of additional fat and fibre. But if the carcass is lean, and wanting in the necessary quantity of muscular fibre and offal to render the parts immediately susceptible of enlargement, a time and a quantity of food are required to produce that state of body, which are often very improperly included in the time required for fattening, but which belong most exclusively to the grazing period. Hence the justness of the remark, that cattle should be fed gradually from their birth upwards.

The age of four years has been fixed upon as the most advantageous time for cattle to be fattened and sold. The animals that are

most forward in condition will be ready in February, when the sale will commence, and be continued regularly till May, in single animals or more from the stalls, as they become prime for the butcher. If any animals remain in May, that are not fit to be slaughtered, they are sent to the field to graze, and are sold during the summer, as they become ready, under the name of "grass-fed" beef.

In the mode that has now been detailed, the rearing and fattening of cattle becomes a systematic manufacture of vegetable food into fat and muscular fibre, by means of the chewing and digestive organs of an animal. To please the taste of these organs, and to afford the nutriment that is most proper for the required purpose, constitute the whole art of the process now described. The foundation of the system lies in the young calf having an ample supply of the mother's milk, continued till it arrives at an age sufficient to enable it to live and thrive on other food. The after treatment must be kind, always to promote the onward progress of the animal. It is a very common mistake with rearing of cattle, to pinch the quantity of food, in order that they may be reared at little cost, and a more erroneous idea can not be entertained. An animal that is stunted in growth, during its infancy, is never able to recover the natural vigor; the carcass never swells into bulk, nor enjoys the lubricating essences, nor the nutritious juices, that are necessary to promote the activity of animal life. A more destructive practice can not prevail in any department of agriculture.

It is a very common practice to give the calves, by hand, the milk that has been drawn from the cow, and held in a pail or bucket, from which the calf soon learns to drink. A pinched allowance is also given them in order to save milk, for the purpose of making it into butter and cheese. But if these articles are imperatively required, the making of them need not be attended with the starvation and abuse of the young animal: for it only remains to appropriate a certain number of cows for the purpose of suckling the calves. House the other part for yielding milk for the dairy. This method answers both purposes, and removes the evils that result from uniting them, whereby the one defeats the purposes of the other. From whatever cause it may arise, the fact is certain, that calves fed with milk, by hand from the pail, never thrive so well, nor become such fine animals as others that are suckled, even though the quantity of milk be most ample, and to the full satisfaction of the animal. It is wholly useless to search for theory, when the fact is so evident and certain.

The second essential requisite for the profitable rearing and fattening of cattle, is the proper accommodation during summer and winter, during the different periods of their age and growth; for if an ample supply of nutritious food be necessary to supply the wants of nature, and to advance the healthy maturity, shelter and warmth are no less necessary to promote the development of the proper effects of the food which the animal consumes. During the period of suckling, the calf is confined in a single department of ten feet by four, or thereabouts; which single confinement prevents any annoyance by the animal going and sucking the ears or navel of the other, after sucking the dam. A door from the passage opens into each apartment. The floor is wooden plank, very closely pierced with auger holes, which carry away all the moisture, and afford a dry bed for the animal. Short straws or chaff are the best litter. In the grass paddock, whether they are removed from the pens, a shelter-shed is indispensable, and an ample supply of good fresh water. The summer pasturage must be luxuriant; the fields all well watered and fenced, and provided with a shelter-shed opening to the four quarters of the heavens, and thus affording shelter from every direction.

The winter accommodation requires very particular attention. The supply of juicy food must be ample, but not nauseating; the littering of the yards must be very frequent, in order to keep the yards dry; and the shelter-shed must be roomy and warm, with the bottom sloping outwards, to prevent the water from standing within the shed. It is advantageous that the cattle eat the food under cover, which protects both the animal and the food from the inclemency of the weather. This purpose will be very easily and conveniently effected by roofing over the whole area of a farmery like the terminus of a railway. It promises to be a valuable improvement of modern times, and places the animals and every other thing under cover. It prevents the heavy rains from injuring the dung, and the hot scorching suns from drying and withering the surface of the strawy materials.

A very important question has long been

agitated in the agricultural world, and is yet very far from being settled, whether cattle are best fattened in open yards provided with shelter-sheds, or by being tied in stalls in a roofed house? In the case of store or keeping cattle the question is easily solved. A freedom of moving about in the yards is necessary to promote the growth and healthy state of the animal; and the unlimited contact of fresh air very much advances the fruitful progress of animal life. In the case of fattening animals it is asserted that cattle fatten more quickly when they are confined in a warm temperature, and that the secretion of fat is encouraged by the animal being deprived of the power of any movement by reason of being tied to a stake. But the flesh of animals that live and are fattened in a warm temperature is always found to be loose and flabby, and wanting in the firmness and consistency that are imparted by a moderately frigorific quality of the atmosphere. A number of animals tied in confinement are always breathing the contaminated gases; and the advantages to health are known to be very great of respiration being performed in a large volume of air. The feet of cattle tied in stalls become soft, and the animals get lame and unable to perform any travel. The feet of cattle fed in yards keep sound, and the flesh is much firmer, and is very easily distinguished by the eye and touch of experience. The animal is fattened as quickly as when tied in a house, when the proper care is used in erecting the yards and sheds, and when the necessary attention is employed in keeping the yards dry and the animals comfortable. Less labor also is created than in removing the dung from the feeding houses. But on farms of any considerable size both methods may be very usefully employed; the animals of the more unruly nature may be tied in the house, and the quieter may be put in yards, and not more than two together. The objection to feeding in yards generally arises from putting too many animals together, and then one is disturbed by another going and pushing it about. When cattle having a thick coat of hair are tied in a house to be fattened, an advantage may be obtained by clipping the coats, in order to promote a freer perspiration, and to remove from the skin the itching and uneasiness engendered by the close covering of the hairy integument.

## Best varieties of Spring Wheat.

Samuel Northrup, of Delona, Sauk Co. Wisconsin makes the following remarks in the *Wisconsin Farmer* on seed wheat, and on the best kinds for spring sowing. His observations as to seed are just as applicable to winter wheat as to spring. There is not one farmer in one hundred that grows wheat in this state that does not pursue the slovenly shiftless system of sowing any kind of seed in any way, and then there is a general wail set up the next season that the crop is not worth harvesting, and there is "nothing to sell."

Take some hints as to preserving seed from this letter:—

"Without stopping to premise further, I will say that in the noise and bustle of the go-ahead-iveness of the present, we farmers mainly failed to 'hold fast that which is good' of the past. Less than a half century ago, the good farmer took unwearied pains in weeding, selecting, harvesting, threshing and preparing his seed wheat. This was before the destructive threshing-machine (destructive to seed) was introduced or invented. In those slow days of yore, the seed destined for sowing was rid of noxious weeds and seeds while standing, the best spot in the field being selected for seed, and when barely ripe it was carefully harvested, housed and threshed, and then thoroughly cleaned; nor was this enough, but it was taken on to the barn-floor, the big barn doors well braced open, the stalwart husband-man, with wooden scoop shovel in hand, would cast the golden grain athwart; the barn floor, against a brisk wind, and then from the further end of the pile, he measured up his seed. After having done all this, he did not consider his seed ready for the field until he had made an application of the best remedies against smut, worms, birds, &c.

This contrasts strangely with the *modus operandi* pursued by the farmers of this fast age. Not a thing done to save the largest and best kernels for seed, but on the contrary the whole crop of wheat is rushed pell-mell into that maelstrom, the threshing-machine, where the greater portion of the large and best wheat is not saved for seed as above, but ruined, spoiled—the soft and tender protuberance on the seed or germinating end is bruised, encased or broken, and many of the best and plumpest kernels cut into. Hence the cause of all causes why that variety of spring wheat called Rio Grande has not succeeded better in this part of the State since its introduction. It has the largest berry of any wheat I ever saw—consequently the most injured by threshing. If it were so saved as to be all good seed, it would require

considerable more seed to the acre, say 12 qts. at least, than the Canada Club, it being so large. In consequence of the seed being large and injured by threshing, it is always too thin on the ground, rarely over yielding more than half as much as the ground is capable of producing, besides being more liable to be rusted or shrunken.

My opinion is that the Canada Club and Rio Grande are still the best varieties of spring wheat, and that they should not be abandoned or rejected in haste. Let the seed be properly washed and prepared, not omitting the blue-vitriol application. Let the ground be properly tilled, the wheat put in early and well, and ten to one there will be a good crop next harvest."

## An English Farmer.

We are permitted to take the following from a private letter from Mr. J. H. Stickney, Esq., now in England, to his father, Josiah Stickney, Esq., of Watertown. The former describes a visit to Mr. Thomas Crisp, of Butley Abbey, Suffolk, a farmer and breeder not unknown in America for his fine draft horses and swine. We saw several of his animals at the Show of the Royal Agricultural Society at Chester, and made an arrangement to visit his farm, but circumstances prevented. Mr. S. says:

Mr. Crisp occupies about five thousand acres of land, which is in separate farms, on each of which is a resident bailiff. He keeps about 3000 South Down sheep, few cattle, many horses (Suffolks) including several brood cart mares, one beautiful blood stallion three years old, and any quantity of pigs. He works a few pair of cattle of the Dutch breed. They are harnessed to the plough, cart or whatever they are to draw, exactly as we harness a horse—just the application of what I have long talked of. It always seemed absurd to use a yoke. They go by bit and rein and do their work very easily—no hooting, screaming or thrashing. In most cases horses are used entirely. On Mr. C.'s farm I did not see less than four teams in a field at any time—each consisting of a pair of horses or oxen—and his ploughing is not beyond six inches deep. He never requires more than two horses for breaking up. His land is mostly very light, sandy loam, and some of it is very poor. He manures quite heavily—I should judge about seven or eight cords per acre, or heavier than this for certain crops. In fact the land for every crop is prepared as a market gardener would prepare it. Much machinery is used—everything, almost, being done by horses and implements drawn by them.

A man to be a large farmer here—gentleman farmer, so called (and they are both gentlemen and farmers)—must have the requisites, which would have made him equally a gentleman merchant. He must know the principles and details of farming, as well as any of his men, but he works the brain rather than the hands, and exercises a general and constant supervision.

Mr. Crisp keeps five road horses for his own driving—all good ones. He is frequently riding from morning till evening. I asked him how many agricultural horses he kept. He replied that he did not know, but would soon miss one if gone. In three fields I noticed twenty horses and eight oxen at work, in two fields five teams each, and in a third four teams. He works only the Suffolk breed. He showed me five magnificent Suffolk stallions. A two-year-old colt was the finest of his age I ever saw. I don't wonder a man is inclined to spend money, if he has it, and taste withal, when such animals are shown him.

His black pigs are very fine, and seem to be taking the lead in this variety. Mr. C. breeds more of them than of the white. He has a good number of the latter, and from them I have selected a boar for you, now about ten months old. He is a very fine one and own brother to the one which took the prize at Chester. Mr. C. pursues a different course in breeding from that followed by many in our country. He prefers breeding stock of two and a half to six years old to that of less age. The progeny is stronger and more thrifty.

On Saturday morning Mr. Crisp took us to walk over his farms. We were on foot from nine o'clock in the morning to two in the afternoon, and I should judge must have walked at least ten miles, mostly over ploughed land. He pursues the four-shift system. In this mode of rotation every piece of land bears the same crop but once in four years. The difference between this and the five and six-shift is, that in the former there is but one crop of wheat, while in the latter there are two or more crops of that grain. Hence it requires far better land to carry the two last methods of rotation than the first. The four-shift is the general one of England—(it is others exceptional. Of the mode of culture practiced for different crops, I will speak on another occasion.—*Boston Cultivator.*

Be sure and examine your cattle at this season, and if you find vermin in their coat, sprinkle sand and ashes well over them.



## NEW ADVERTISEMENTS.

WM. ADAMS, Detroit, ..... Trees and Plants.  
Bloss & Co., Detroit, ..... Seed wanted.  
G. YOUNG & PINNEY, Plymouth, Peach Trees.  
do do do Tobacco Seed.  
WHEELER, MELICK & Co., ..... Agricultural Machines.  
Albany, N. Y.

## ANSWERS TO CORRESPONDENTS.

Richard Mack, New Casco.—Your corn has been sent by express.  
J. F. Flint.—Have sent the corn, the Dietyra, and other seeds as you directed.  
R. E. B. Romeo.—The question is whether the horse referred to is a blood horse. What is the pedigree of Berkshire Boy? What horse was his sire and of what stock was his dam? It would do to pronounce a horse "blood or thoroughbred" unless it is so proved satisfactorily, according to the rules of breeders. Again in the official list of premiums published by the N. Y. State Agricultural Society, the award referred to could not be found. In whose name was the entry made, and what was the name of the colt? A premium thoroughbred three years old ought to be worth \$1,000 as a stock horse, at the least, judging of horses as they are sold for breeding purposes.  
Young Farmer, Lenawee.—As soon as the wheat shows it has begun to grow, plaster may be sown, at the rate of a bushel per acre. The drier the land the better the effect. Now, any time before the first of April, will answer. Plaster won't make up for poor seed, and general bad treatment of land.

## MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, MARCH 19, 1859.

## The Resignation of the President of the Agricultural College.

The Lansing Republican announces the resignation of J. R. Williams, President of the Agricultural College in the following very just terms:

Hon. JOSEPH R. WILLIAMS has tendered his resignation to the Board of Education, of the Presidency of the Agricultural College. This step, made necessary by private interests, cannot but be regretted by the State. The high personal character of President Williams, his earnestness in the cause of agricultural education, and his scholastic endowments, made him for that position, one man among a thousand. His whole-souled devotion to the general subject of reform in respect to the union of manual labor with educational advancement, and especially his efficient agency in the passage of the Agricultural Land Bill, had made him well known to every friend of this cause throughout the Union. The efforts of Mr. Williams have been unsparingly given to the advancement of the best interests of our State Institution since his appointment, and if they have been less successful than he could wish, that result is plainly attributable to combined agencies, within and without, at work against him.

## Wool Talk.

We note that a great many papers quote some suggestions from the New York Tribune relative to selling wool on the backs of the sheep, or before it is shorn. These suggestions are esteemed very wise, and very sagacious; but we should like to know what they amount to. We do not believe that the New York Tribune reporter, or any other reporter, who knows anything about wool, would forbid any man from agreeing to accept a good price for his wool off or on the back of the sheep. If we had a thousand head of pure blood Spanish merinoes on the hills of any part of Michigan at the present time, and every fleece were sure to weigh six pounds when clipped, and a stranger, a speculator, or agent for a manufacturer came along and offered us 60 cents a pound for the lot when clipped in June next, does any one think we would say him nay, if he only made us sure of our pay? If they do, they are welcome to; but we should close the bargain forthwith, and we should be very careful, not only that all our sheep were shorn as close as though they had passed through the hands of a Detroit street broker, but also that every pound of wool grown by the animals went into the scales in fulfillment of the bargain.

There is not the least objection to selling the fleeces on the backs of the sheep—there is sometimes a huge out-cry about this speculator, and the other agent going through the country, and picking up lots on the sheep's backs, as if that were a great crime. Now there is no cruelty to be accounted for in such cases, for the article generally "sold" the worst is the operator, who finds that if he had waited for the market to open, and had gone in when the whole clip was being sent on for sale, he would have made better bargains for himself and his employees. Now we say, sell your wool by all means, either on or off the sheep's back; but only just take care that you get a good price for it, and when you have once got that, get enough paid down so that you will be sure there will be no backing out of the bargain. If any one offers you 60 cents a pound for a hundred fleeces grown on the backs of sheep that you

know to be not over half or three quarter blood merino, take it, and be sure and get \$100 advance to bind the bargain. The use of the money to help in putting in the spring crops this season, won't hurt a bit, and we will guarantee the sale of the wool correct. We are acquainted with a good many purchases of this kind made within the past six years, and in nine cases out of every dozen, it has not been the wool grower that has suffered the most.

We do not advise selling the fleece on the sheep's back, but it may be well to note that that mode of selling may be practiced to advantage as well as any other, and that the "talk" against it has no real foundation amongst practical men in the business. Of course if a farmer keeps himself in ignorance of the markets for fear of spending a dollar for his home papers, there are sharper always on hand to take advantage of his ignorance, and if he thus becomes the laughing stock of his neighbors and have to "bellow" a little because he gets hurt, who has he to blame but himself, and his own petty parsimony, which saves at the spigot, but spends at the bung.

## An Acknowledgment.

The reply which we gave to the invitation of the Rural New Yorker to "come to the centre" appears to have been such as to have knocked the challenger clean over the ropes, and outside of the lists in which he threw down that "glove," and as he seems to acknowledge his position by making as graceful a retreat as it was possible, we suppose we will have to let him go, with a gentle hint from the old proverb, which teaches strangers to "let sleeping dogs lie."

In this connection we have a word for our rather feeble friends of the Wool Grower. In their last number they take us to task, because we warned the sheep breeders and wool growers of Michigan not to put too much confidence in the reports of eastern papers relative to the wool crop, and markets, because from the experience they had had, it was evident that parties at a distance, not interested in what concerns us at the west, except to buy what we have for sale at the cheapest rates, would hardly be expected to have the same interest, as the editors and presses that were sustained at home, and were dependent solely on western interests for their support. These toddlers of the Wool Grower who use their paper for the mere purpose of drawing custom to what they term their "Wool Depot," undertake in one of their columns to abuse us, and to defend certain eastern papers that we mentioned as not evincing last spring a knowledge of the wool markets, in their reports. To show the consistency on this point of the Messrs Goodale & Co., we quote what they themselves say in the same column, relative to eastern papers which have commented upon the wool market, and the extracts are taken from what they have to say on the late large wool sale at Boston.

First they observe:

"The above sale of Wool in Boston has been heralded over the Telegraph wires from one end of our land to the other. We think it may be safely set down as a fore-runner to lower prices.—Where are the high prices which eastern papers and reporters have talked and quoted for two months?"

Will the Messrs Goodale & Co., explain, if this is not backing us up in all that we have said as to the knowledge of the markets evinced by eastern papers.

Again, they say,

"It looks as though the sale was smothered after the clip now on the carcasses. It would be very difficult to get up an auction sale of Wool in the present active demand, without its becoming a true test of the market, excepting by previous agreement, and if this is a true test of the market, where are the 70 and 80 cent Wool, which the Independent and the Tribune have been talking about? Is Wool on the decline? What next?"

Here again is another stab at the eastern press, and its ignorance of the wool market at the east? When the MICHIGAN FARMER, whose editor has no Wool Depot to cater for, finds fault with eastern reports for not being as reliable as to western markets as those of the western press, it is all wrong; but the Wool Grower whose managers depend on their commissions from their Wool Depot, may find fault once in awhile when it don't hurt any body at the east, by way of exhibiting their consistency, and their independence, both of which seem to be of the same stamp! Will the Wool Grower please to give us a few more such exhibitions. We are delighted with them, as they prove all we have yet advanced! and seem to assure us that we have a strong ally sub rosa in our Cleveland contemporary.

## The University.

We have received a neat, well printed, well arranged pamphlet, entitled *The Catalogue of the Officers and Students of the University of Michigan for 1859*. But we find much information in this pamphlet in addition to the mere lists of the names of the students and the officers and faculty. The whole organization of the University is laid down in detail, and yet so succinctly that it

is easily referred to and as easily understood. The conditions of entrance, the several courses of instruction, with the facilities afforded to students to prepare themselves for professional training, are explained and laid down in the most satisfactory manner.

We notice that in this catalogue, it is announced that as soon as practicable "it is designed to organize a special department to be entitled 'the Agricultural course,' in which lectures will be given upon the theory of Agriculture as a science, and upon its special details. At present, lectures are given upon Botany, Zoology, Geology, Mineralogy, and Chemistry, in which the application of these sciences to Agriculture is shown; and in the Department of Practical Chemistry, students have an opportunity to study and engage in the analysis of soils, and other analyses, under the supervision of the Professor of Chemistry. It is believed that when this course comes into full operation, the collateral advantages of its connection with the University, no less than the thoroughness and fitness of the course itself, will commend it in a high degree to the attention of the agriculturists of the State."

FOR JACKSON.—Yesterday we were called upon to examine a six months Suffolk boar, purchased by the Hon. Michael Shoemaker, to send out to his farm at Jackson, from F. E. Eldred, Esq., of this city. This boar is as fine an animal of his age, of the breed, as we have seen any where, and we have no hesitation in commending him as a stock animal. His growth, as a six months pig, without grain, is good, without any sign of being forced. He is a broad, deep, well made up hog, with a good length of body, and a promise of size at the end of the next six months, that will make him a superior breeder. He should not have a grain of corn fed to him; if at any time he needs a little grain, let it be oats. Corn will be apt to fatten him up, and render him unfit for practice at an early age.

## Literary News.

HOME HITS AND HINTS.—This is a volume of entertaining stories for fireside reading, and one which may be safely put into the hands of children, as it is full of healthy sentiment and quite free of the flashy love nonsense so common nowadays.

It is written by W. T. Coggeshall, published by Redfield, New York, and for sale by Francis Raymond, Detroit.

Pinney's *Pepper Bottle* in this number of the FARMER is from its pages.

Dr. E. B. O'Callaghan, of Albany, compiler of the "Documentary History of New York," has in an advanced state of preparation a Bibliographical Catalogue of Bibles and parts thereof, printed in English in this country. This catalogue will include the editions of the various versions of the Scriptures, and come down to 1860.

N. P. Willis has written a new book, entitled "The Convalescent," which is to be published soon by Charles Scribner, of New York. It will doubtless contain many of those interesting letters published in the Home Journal that recount the observations of the author in a most pleasing manner.

Mr. J. T. Headley is now editing a manuscript work by Theophilus Roessle, the keeper of the Delevan House in Albany, containing the results of his twenty five years' experience as a farmer and horticulturist. Mr. Roessle is a German. He made a fortune out of a market garden. The famous "Peach Blow" potato was originated by him, from half a "merino" and half a "white" tied together and planted in sandy soil.

F. H. Underwood is said to have severed his connection with the firm of Phillips & Sampson, and with the Atlantic Monthly which he is reported to have originated. The severance don't seem to have "cut" the Atlantic in the least degree.

A life of Milton has been written by David Masson, a professor of literature at the London University, which is pronounced by the critics to be one of the most remarkable and excellent biographies of the age. He has long been one of the most talented contributors to the North British and British Quarterly Reviews. His works are in course of publication by Messrs. Gould & Lincoln of Boston.

The American Sunday School Union are about to issue quite a number of new works adapted to Sunday School Libraries. Their names are, *Emblems from Eden*, Evelyn Grey, Ellen Mordant, Wood Cutter of Lebanon, The Right Choice, Charles Grant, Fourteen Ways of Studying the Bible, Masters and Workmen, Ears of the Spiritual Harvest, The Little Guide of Adirigoole, Over the Sea, Sunday Sunshine, Exiles of Lucerna.

Sheldon & Co. of New York announce a volume entitled "Smooth Stones taken from Ancient Brooks," by the Rev. Mr. Spurgeon; also a book on the Holy war, entitled "The losing and taking Mansoul," a religious work.

James Miller of New York is getting out some of the old fashioned children's books, illustrated in modern style, such as *Baron Munchausen*, *Robinson Crusoe*, &c.

J. S. Redfield announces Paley's *Moral Philosophy* with annotations by Archbishop Whately, and a volume of sermons on the Love of God, by Charles Kingsley.

Dellaser & Proctor, are getting out "Dr. Franklin's autobiography," "Popular tales from the Norse," and Two Journeys to Japan by Kenahan Cornwallis.

Messrs. Ticknor & Fields of Boston announce as soon to be ready, a volume by De Quincey, and the Money King and other poems, by John G. Saxe, Goeth's correspondence with a child; two works by the celebrated Mrs. Jamieson, Motherwells Poems, Percivals Poems, Dantes Inferno, a new edition, and a volume of Poems by Gerald Massey.

Willis P. Bayard, of New York, announces Carlyle's *Life of Schiller*, uniform with the same authors Frederick the Great.

Messrs. Dick & Fitzgerald announce a work entitled *The History of Love among all nations*, by the famous Lola Montez.

The Appletons are about to send out a series of children's books by a Mrs. Gatty, a work on the historical evidence of revealed religion, by the Rev. Geo. Rawlinson.

Drayson's *Earth we inhabit*, and *Leslie's life of Sir Joshua Reynolds*.

The Harpers have in press a volume of *Travels in Spain*, Grattan's *Civilized America*, a work that is stirring up American criticism, owing to its Trollopian pictures of life in Boston and elsewhere in the United States; *South's Household Surgery*, and Isaac Taylor's *Logic in Theology*.

The London Quarterly Review, first number for 1859, of Scott's republication has been received. The contents are very varied, but that which interests us the most is the excellent article upon "BREAD," in which the writer reviews the recent works on the subject, and treats it with great cleverness and knowledge.

THE METHODIST.—We have just received this work from the publishers, Messrs. Derby & Jackson, which we shall notice as soon as we have time to read it. It is for sale by M. Allen & Son of this city.

Received.—A circular of small fruits grown at the Nursery of Joshua Pierce, at Washington, D. C. He is cultivating the Catawissa Raspberry largely.

The second annual catalogue of plants sold by Edgar Sanders of Chicago, which presents a fine assortment of bedding out plants.

A very beautiful colored portrait of imported *Grand Turk*, the largest Shorthorn bull in the United States, has been received and which we esteem very highly. This portrait was sent us by Mr. Samuel Thorne the owner. We have had it framed and hung beside those of *Grand Duke* and *Duchess 64th*, sent to us some years since by Mr. Thorne's father.

A catalogue of the University of Michigan, which we have noticed in another column.

From Lawrence B. Valk, architect, N. Y., a very neat colored design of his new American style of country cottage and residence, of which he furnishes complete plans for \$40.00.

A catalogue of Shorthorn cattle to be sold by Harness Renick at auction, on Wednesday, June 15th, at Circleville, Ohio.

The publishers of the *New American Cyclopaedia* have issued a list of the contributors to the volume issued, or nearly ready, including one to five. The list exhibits a very wide range, and a prodigious amount of the best ability to be found on both sides of the Atlantic.

## Foreign News.

The arrival from Aspinwall, of the Star of the West, brings information of a revolution taking place in Chili, and the expectation of another breaking out in Peru.

By the steamship North Briton, we learn that Mr. Felix Belly, the projector of the canal across Nicaragua has sailed from France for Nicaragua, for the purpose of carrying out his project. He is accompanied by a staff of thirty three persons, and will take possession of the canal route on his arrival.

It is rumored that a marriage is projected between the Prince of Wales and the Princess Alexandra, a daughter of Prince Albert of Prussia. This would be connecting the two Kingdoms of England and Prussia still more closely by family alliance.

The French Emperor is still pushing forward his warlike preparations. Ten millions of rations of dried vegetables have recently been ordered for the use of the army. A second division of the army of Algiers had received orders to take up their line of march for France.

Prince Napoleon had also received a deputation of Italian residents at Paris, and his speech was such as to give "confirmation to their most ardent wishes."

The City of Washington has brought dates from Liverpool to the 2d of March.

The preparations for war continue with the greatest activity on the part of both Austria and France, and in consequence the stock market shows a decline in the prices of securities.

Lord Cowly, the British Plenipotentiary to bring about a peaceful solution of the difficulties between the two powers, has gone to Vienna and had an interview with the Emperor.

All that can be said on the subject of the war in prospect, is that it is unquestionable that Napoleon is firmly resolved upon it, and that he is taking every opportunity to render it popular with the French nation, before he commits himself fully by hostilities. The English attempt at mediation, will only be used as so much dust, to conceal the view of what is taking place, and will be found of no service in arresting the war, which seems to be fully determined upon.

The war fever is also reported to have extended to Germany, and we notice that some of the smaller powers of the confederation are ranging themselves on the side of Austria.

In England, the great topic of the day, is the Reform Bill, which is about to be introduced by D'Israeli. This bill will make a very great alteration in the representation in the House of Commons, and will extend the elective franchise to a very large number of persons who are now excluded. It proposes to confer the privilege of voting on members, to all persons who belong to the learned professions, and also to all parties who may have a certain amount of investments in the funds or deposits in saving or other banks.

Advices from India state that the kingdom of Oude has been completely subdued, and that the people are perfectly pacified.

## Scientific Intelligence.

*Agricultural Patents for the Week ending March 1859*.—John C. Baker of Mechanicsburgh, Ohio, a new arrangement for seed planters.

T. D. Brown of Montello, Ohio, an attachment to harness for supporting driving lines over the horse's rump.

Charles Brownlie, Buffalo N. Y., an improvement in harvesters.

J. L. Chapman, of Kramandy, Ill., combination of frame for corn harvesters.

Geo. E. Chenoweth, Baltimore, Md., an improved step or standard for harvesters.

George H. Clark of East Washington, N. H., improvement in the making of hollow bars in bee hives.

Carlos and Darwin E. Eggleston, Beloit, Wisconsin, an improvement in seed sowing machines.

David P. Kinyon, Raritan, N. J., a combination by which the height of the cutting frame can be regulated without interfering with the driving machine.

T. C. Kneeland, Hartford, Wis., a simple and efficient arrangement of revolving horse rakes.

A. F. Ledbetter, Westminster, N. C., a new and efficient apple cutter and corer.

William H. Long, Lancaster, Pa., arrangement of levers on horse rakes.

Robert Niver, Yates, N. Y., a potato digger.

Daniel Ranick, Intercourse, Pa., improvement in harvesters.

Isaac Rulofson, Penn Yan N. Y., an arrangement of beam and fixtures of plows.

Amos G. Thompson of Bellville, Ohio, improved arrangement of spiral springs in corn planters.

A. Van Trump, Lancaster, Pa., arrangement of feed rollers to sugar cane mills.

Russel Warner, Brattleboro, Vt., a harvester, with horizontal rotary cutters, and machine going ahead of the team. This is something new.

Wm. H. White, Ganellsville, N. Y., fixtures on horse rakes.

J. M. Whitney, Bolton, Mass., arrangement of hinged arms, and adjustable brace, standard on plows. The same also a new arrangement of teeth and fixtures on cultivators.

P. Stewart, New Lebanon, N. Y., a cast iron fence post, a new article of manufacture.

An invention named "Chisholm's deodorising process" has been announced in England whereby electric or galvanic agency may be applied to sewage or other noxious matters, and deprive them of their foul smell, and decompose the gasses deleterious to health, which abound in them.

The deepest coal-pit in Great Britain, and probably in the world, has after twelve years' labor, been completed and opened at Dukinfield, Cheshire. The shaft of this pit is six hundred and eighty-six and a half yards deep, and the sinking of it cost nearly one hundred thousand pounds.

The Eland, a mighty specimen of the antelope genus from Africa has been on trial for some years in England for purposes of domestication, and recently a dinner was given in London at the Athenaeum Club, for the purpose of testing the qualities of the meat, at which Professor Owen was present. This distinguished authority thus pronounces on the quality of the Eland.

"The quality of eland meat is the finest, closest, most tender, and masticable of any meat. In taste the first impression was of its sweetness and goodness, without any strongly marked speciality of flavour. It was compared with veal, with capon; finally the suggestion that it was mammalian meat with a soupcon of pleasant flavour was generally accepted. The portion of fat served with the joint differed from that of the deer. It was rapidly condensing into tallow, but retaining (like the best beef) its clear melting character. It was perfection as fat, and sweet pudding made of it was extremely light and delicious. On the whole the committee rose with the conviction that a new and superior kind of meat had been added to the restricted choice from the mammalian class at present available in Europe."

## General News.

—We notice that an effort is about to be made to establish a woolen factory at Pontiac. This is an enterprise well worthy of all the "aid and comfort" that can be given it, and should be liberally dealt with by all our citizens.

—A new Yankee settlement has been formed near Black Lake Harbor, and all the graduation lands have been taken up. The Ottawa *Clarion* states that twenty seven families were added to it last week.

—A company of about thirty persons, started for Pike's Peak from Coldwater, last week. The company took teams, wagons all the other fixtures necessary. E. Butterworth, Esq., was the commanding officer.

—A well planned and executed burglary took place at Paw Paw last week. The burglars first went to the residence of the County Treasurer and stole his pantaloons from his room and house, whilst he was asleep; they then passed out, went to the office of the treasurer which they unlocked, entered, unlocked the safe and took away four hundred dollars in money, and some valuable papers. The whole affair evinces much professional skill.

—A new penny paper called the *Press*, has been started in Cincinnati by Henry Reed, formerly of the Cincinnati *Commercial*. It is worked on a Hoe lightning double cylinder press, driven by one of Ericsson's Calorie Engines. It has now been in operation something over a week, so that a fair opportunity has been had for testing its merits and advantages. After giving it this fair trial, the editor says its complete success is established, he congratulates his readers that in introducing to the West this wonderful motor, his expectations are more than realized. The *Press* is printed at the rate of three thousand impressions an hour, and the paper bears evidence that no better work can be done by hand power or the old steam engine. The expense of running it is only one cent and a half an hour, or 36 cents for 24 running hours!

—General Scott is still sojourning in New Orleans, trying the effect of warm weather upon his health. The General has experienced the happiest effects from his visit to the South, and will resume duties in Washington in a few weeks.

—The McKim bequest of \$400,000 to the city of Cincinnati has been declared valid against the suit of his relatives, who will carry the case up to the United States Supreme Court.

—Mr. G. B. Smith, of Baltimore, predicts the appearance of locusts the coming spring, in Virginia Maryland, North Carolina, Tennessee, Georgia and Mississippi. They belong to the tribe of thirteen and seventeen years locusts.

—They had a dance the other night at Madison, Wis., for the benefit of the church. The *Sentinel* supposes it was a religious movement!

[Of course of the *Shaker* persuasion.]

—The statement made up at the U. S. Treasury Department shows that the circulation of the banks throughout the country in 1856 was nearly \$215,000,000; in 1857, \$150,000,000; and in 1858, \$198,888,000.

—John B. Gough, the celebrated temperance lecturer, after lecturing very successfully in Scotland has gone to England.

—There are now three Jews in the House of Commons of England.

—Rarely, the horse tamer, has had as much success in Belgium as in other countries. The wickedest animals in the army were treated by him with the utmost success.

—The cold winter was felt more in Texas than at the north this season. The Rio Grande was frozen so hard that teams crossed below Albuquerque.

—Mr. Wm. Kline has been appointed General Superintendent of the Michigan Southern R. R. Telegraph lines.



## FOREIGN AGRICULTURE.

## Rearing of Cattle.

FROM THE LONDON FARMER'S MAGAZINE.

In Great Britain, where animal food enters so very largely into the general consumption of the inhabitants, no part of the economy of farming demands a more earnest attention than the rearing and fattening of the animals that are used for that purpose. A detailed statement of the most approved mode of managing cattle may not be unserviceable.

The calving season commences in January, and continues till June, the earliest dropped calves being always the best, and maintaining a superiority throughout the season. So soon as it is dropped, the calf is rubbed dry with straw in hand; an egg is crushed and passed down its throat, and it is carried to a single apartment, in which it lies undisturbed for some hours. In the meantime, the teats of the cow are stripped by the fingers of the hand, in order to discharge the first milk, which is reckoned to be unwholesome. The calf is then introduced and sucks a moderate quantity, and is again returned to its apartment. The sucking is performed thrice a day: at six o'clock in the morning, at noon, and at six in the evening. The cow-house and the calf-pens are adjoining, and afford convenience by that position. The calf is led by a rope or halter on the head, and when it is sucking, the end of the rope slung longitudinally for that purpose behind the cow. Two calves suck one cow, and are placed one on each side.

So soon as the calf is able to chew with its mouth and to masticate, bruised oil cake is placed in a box in a corner of the apartment, which food the animal very soon learns to chew, and it has a very nourishing effect. Another box contains a lump of chalk, which the animal licks, and it is found to be very useful in correcting the crude acidities of the stomach. A rack is placed on the subdivision of the apartments, and in it are placed clover and vetches, which the animal soon learns to eat. One rack thus serves two calves.

The calf continues to be fed and suckled in this manner for three months at least, when it will be grown strong and fit to be removed to an adjoining grass paddock, which must be rich in pasture, well sheltered, and provided with a regular and ample supply of fresh water, and a roomy shelter-shed. An orchard suits well for this purpose, the shade of the trees is grateful and the grass is tender for the young animals under the shade of the trees. At the end of sixteen weeks the milk is gradually withdrawn, and if the grass in the paddock be scanty, cut clovers and vetches must be given daily in racks, and in a fresh state. The shelter-shed must be well littered and kept dry.

Sucking the dam is very much preferable to giving the milk to the calves by hand from the pail; for by exposure the volatile gases of the milk escape; and in the process of sucking a quantity of saliva is engendered, which is necessary for the proper digestion of the milk, and for the secretion of nutritious juices. The appearance of the animal at once shows the great difference of the two ways of rearing; the suckled calf being very sleek in the coat, light in the offal, and of a thriving and animated appearance. The animal that is fed by hand is heavier in the panache, slower in growth, and of a generally more unthrifty appearance.

By the month of July the earliest calves will be able to be removed from the weaning paddock to the pasture field, which must be rich and well sheltered and watered. They remain there till the end of October, when they are removed to the farm yards, where they are put into yards provided with shelter yards, and about six or eight animals in each yard, into which fresh straw is put daily, and the feeding crib is frequently moved from place to place in order that the dung may be equally made, and get the same trampling and consolidation in every part of the yard. Fresh tops of turnips are given them to eat daily; and in the early winter the tops of mangel wurtzel are added. The smallest sized turnips go with the tops, and form the food of the animal during the first winter, when the teeth are weak and the mouth is delicate.

In the first part of the month of May the grass is generally sufficiently grown to afford a bite to pasturing animals, and at that time the young cattle, now about one year old, are removed to the pasture-fields, which must be well fenced and provided with a shelter-shed and an ample and constant supply of fresh water. The gates and fences must be made very secure and impenetrable, that no damage may happen to the cattle in trying to escape by leaping the fences, or effecting a passage in any way. The shelter-shed, large and

roomy, is an indispensable requisite for the purpose of protecting the animals against the scorching heats of noon-day and the cold storms of wind and rain that occur in autumn and in the early part of winter. No part of pasturing economy is more necessary.

About the end of the month of October the declension of the herbage and the increasing inclemency of the season render it necessary to house cattle, and they are removed from the fields to the farm yards, and there arranged for the winter in smaller lots than during the last winter, as the size of the animals has increased: six or eight beasts are sufficient in one yard. Fresh straw is given them daily in a wooden crib, latticed in the sides and bottom, and frequently moved from place to place. The mouths of the animals being now strong the bulbs of the turnips are given to them to eat, the tops and roots being cut off before they are removed from the field where they have grown. This operation is performed by a sharp sickle in the hands of persons employed for the purpose. Longitudinal cribs, made of latticed planks of wood, are placed in the yards, in which the turnips are laid every morning by break of day, and where the cattle eat them undisturbed. The mud and filth are very carefully removed by the shovel every morning before the fresh turnips are deposited. The eating of the roots is finished by the time when darkness sets in, which prevents any accidents happening to the animals, from choking or hoving during the night. The water is supplied to each yard in cast-iron troughs, which are fed by pipes, with ball-cocks, leading from higher ground, or from elevated casks, to which the water is raised by a force pump. One trough of five or six feet in length supplies two yards, by being placed across the subdivision walls. The troughs require to be cleansed out occasionally, in order to remove the earthy sediment that falls to the bottom. This purpose is effected by a plug hole in the end of the trough, by which the watery sediment escapes, to which it is driven by a brush in the hand, and assisted by the trough being placed with a gentle inclination to the end which contains the plug-hole. The troughs are most convenient when the sides are shelving.

The young cattle are treated yearly in the manner above described, till the third winter, when the animals will be three years and a half old; and then the fattening process commences. The animals are arranged by the first of November in the feeding-yards, in lots of two, and not more than four together; it being a universal rule that, the smaller the number of animals that feed together, the better they thrive. Accordingly, many most eminent writers have recommended, and many very eminent practitioners have adopted, the mode of confining the animal "singly;" but the most general practice is, two or four together. The yards must be dry, have a good shelter-shed, and a regular supply of water. Cattle eating turnips *ad libitum* do not drink much water; but it is better that they have the liberty of taking or refusing it. In these yards the cattle are supplied daily with fresh turnips, and in quantity as many as they can consume, so as not to leave any part to be wasted or reduced to a loss. Fresh straw and hay are given daily in the cribs. In the spring, in February and March, one feed of oil-cake is given daily, which hastens the process of fattening, and improves the quality of the dung, by enriching the excrements of the animal. The space of three months may be stated, at a general calculation, as the time required to render an animal that is treated in the above manner fat or fit to be slaughtered. But very much, if not all, depends on the grazing state of the animal; for, if it comes from the pasture-field to the feeding-yard in a "lean" state, double the above mentioned time will be required to bring the animal into even a medium state of maturity. Hence arises the necessity of keeping the animals "always" in a forward, fresh condition during the years of their early growth. When a more ample supply of food is given to an animal in this state, the fattening process commences immediately, because, all the parts of the body being kept in a full state an instant readiness is afforded to the accumulation of additional fat and fibre. But if the carcass is lean, and wanting in the necessary quantity of muscular fibre and offal to render the parts immediately susceptible of enlargement, a time and a quantity of food are required to produce that state of body, which are often very improperly included in the time required for fattening, but which belong most exclusively to the grazing period. Hence the justness of the remark, that cattle should be fed gradually from their birth upwards.

The age of four years has been fixed upon as the most advantageous time for cattle to be fattened and sold. The animals that are

most forward in condition will be ready in February, when the sale will commence, and be continued regularly till May, in single animals or more from the stalls, as they become prime for the butcher. If any animals remain in May, that are not fit to be slaughtered, they are sent to the field to graze, and are sold during the summer, as they become ready, under the name of "grass-fed" beef.

In the mode that has now been detailed, the rearing and fattening of cattle becomes a systematic manufacture of vegetable food into fat and muscular fibre, by means of the chewing and digestive organs of an animal. To please the taste of these organs, and to afford the nutriment that is most proper for the required purpose, constitute the whole art of the process now described. The foundation of the system lies in the young calf having an ample supply of the mother's milk, continued till it arrives at an age sufficient to enable it to live and thrive on other food. The after treatment must be kind, always to promote the onward progress of the animal. It is a very common mistake with rearing of cattle, to pinch the quantity of food, in order that they may be reared at little cost, and a more erroneous idea can not be entertained. An animal that is stunted in growth, during its infancy, is never able to recover the natural vigor; the carcass never swells into bulk, nor enjoys the lubricating essences, nor the nutritious juices, that are necessary to promote the activity of animal life. A more destructive practice can not prevail in any department of agriculture.

It is a very common practice to give the calves, by hand, the milk that has been drawn from the cow, and held in a pail or bucket, from which the calf soon learns to drink. A pinched allowance is also given them in order to save milk, for the purpose of making it into butter and cheese. But if these articles are imperatively required, the making of them need not be attended with the starvation and abuse of the young animal: for it only remains to appropriate a certain number of cows for the purpose of suckling the calves. House the other part for yielding milk for the dairy. This method answers both purposes, and removes the evils that result from uniting them, whereby the one defeats the purposes of the other. From whatever cause it may arise, the fact is certain, that calves fed with milk, by hand from the pail, never thrive so well, nor become such fine animals as others that are suckled, even though the quantity of milk be most ample, and to the full satisfaction of the animal. It is wholly useless to search for theory, when the fact is so evident and certain.

The second essential requisite for the profitable rearing and fattening of cattle, is the proper accommodation during summer and winter, during the different periods of their age and growth; for if an ample supply of nutritious food be necessary to supply the wants of nature, and to advance the healthy maturity, shelter and warmth are no less necessary to promote the development of the proper effects of the food which the animal consumes. During the period of suckling, the calf is confined in a single department of ten feet by four, or thereabouts; which single confinement prevents any annoyance by the animal going and sucking the ears or navel of the other, after sucking the dam. A door from the passage opens into each apartment. The floor is wooden plank, very closely pierced with auger holes, which carry away all the moisture, and afford a dry bed for the animal. Short straws or chaff are the best litter. In the grass paddock, whither they are removed from the pens, a shelter-shed is indispensable, and an ample supply of good fresh water. The summer pasturage must be luxuriant; the fields all well watered and fenced, and provided with a shelter-shed opening to the four quarters of the heavens, and thus affording shelter from every direction.

The winter accommodation requires very particular attention. The supply of juicy food must be ample, but not nauseating; the littering of the yards must be very frequent, in order to keep the yards dry; and the shelter-shed must be roomy and warm, with the bottom sloping outwards, to prevent the water from standing within the shed. It is advantageous that the cattle eat the food under cover, which protects both the animal and the food from the inclemency of the weather. This purpose will be very easily and conveniently effected by roofing over the whole area of a farm like the terminus of a railway. It promises to be a valuable improvement of modern times, and places the animals and every other thing under cover. It prevents the heavy rains from injuring the dung, and the hot scorching suns from drying and withering the surface of the strawy materials.

A very important question has long been

agitated in the agricultural world, and is yet very far from being settled, whether cattle are best fattened in open yards provided with shelter-sheds, or by being tied in stalls in a roofed house? In the case of store or keeping cattle the question is easily solved. A freedom of moving about in the yards is necessary to promote the growth and healthy state of the animal; and the unlimited contact of fresh air very much advances the fruitful progress of animal life. In the case of fattening animals it is asserted that cattle fatten more quickly when they are confined in a warm temperature, and that the secretion of fat is encouraged by the animal being deprived of the power of any movement by reason of being tied to a stake. But the flesh of animals that live and are fattened in a warm temperature is always found to be loose and flabby, and wanting in the firmness and consistency that are imparted by a moderately frigorific quality of the atmosphere. A number of animals tied in confinement are always breathing the contaminated gases; and the advantages to health are known to be very great of respiration being performed in a large volume of air. The feet of cattle tied in stalls become soft, and the animals get lame and unable to perform any travel. The feet of cattle fed in yards keep sound, and the flesh is much firmer, and is very easily distinguished by the eye and touch of experience. The animal is fattened as quickly as when tied in a house, when the proper care is used in erecting the yards and sheds, and when the necessary attention is employed in keeping the yards dry and the animals comfortable. Less labor also is created than in removing the dung from the feeding houses. But on farms of any considerable size both methods may be very usefully employed; the animals of the more unruly nature may be tied in the house, and the quieter may be put in yards, and not more than two together. The objection to feeding in yards generally arises from putting too many animals together, and then one is disturbed by another going and pushing it about. When cattle having a thick coat of hair are tied in a house to be fattened, an advantage may be obtained by clipping the coats, in order to promote a freer perspiration, and to remove from the skin the itching and uneasiness engendered by the close covering of the hairy integument.

## Best varieties of Spring Wheat.

Samuel Northrup, of Delona, Sauk Co. Wisconsin makes the following remarks in the *Wisconsin Farmer* on seed wheat, and on the best kinds for spring sowing. His observations as to seed are just as applicable to winter wheat as to spring. There is not one farmer in one hundred that grows wheat in this state that does not pursue the slovenly shiftless system of sowing any kind of seed in any way, and then there is a general wail set up the next season that the crop is not worth harvesting, and there is "nothing to sell."

Take some hints as to preserving seed from this letter:— "Without stopping to premise further, I will say that in the noise and bustle of the go-ahead-attiveness of the present, we farmers mainly failed to "hold fast that which is good" of the past. Less than a half century ago, the good farmer took unwearied pains in weeding, selecting, harvesting, threshing and preparing his seed wheat. This was before the destructive threshing-machine (destructive to seed) was introduced or invented. In those slow days of yore, the seed destined for sowing was rid of noxious weeds and seeds while standing, the best spot in the field being selected for seed, and when barely ripe it was carefully harvested, housed and threshed, and then thoroughly cleaned; nor was this enough, but it was taken on to the barn-floor, the big barn doors well braced open, the stalwart husband-man, with wooden scoop shovel in hand, would cast the golden grain athwart; the barn floor, against a brisk wind, and then from the further end of the pile, he measured up his seed. After having done all this, he did not consider his seed ready for the field until he had made an application of the best remedies against smut, worms, birds, &c.

This contrasts strangely with the *modus operandi* pursued by the farmers of this fast age. Not a thing done to save the largest and best kernels for seed, but on the contrary the whole crop of wheat is rushed pell-mell into that maelstrom, the threshing-machine, where the greater portion of the large and best wheat is not saved for seed as above, but ruined, spoiled—the soft and tender protuberance on the seed or germinating end is bruised, uncapped or broken, and many of the best and plumpest kernels cut into. Hence the cause of all causes why that variety of spring wheat called Rio Grande has not succeeded better in this part of the State since its introduction. It has the largest berry of any wheat I ever saw—consequently the most injured by threshing. If it were so saved as to be all good seed, it would require

considerable more seed to the acre, say 12 qts. at least, than the Canada Club, it being so large. In consequence of the seed being large and injured by threshing, it is always too thin on the ground, rarely ever yielding more than half as much as the ground is capable of producing, besides being more liable to be rusted or shrunken.

My opinion is that the Canada Club and Rio Grande are still the best varieties of spring wheat, and that they should not be abandoned or rejected in haste. Let the seed be properly washed and prepared, not omitting the blue-vitriol application. Let the ground be properly tilled, the wheat put in early and well, and ten to one there will be a good crop next harvest."

## An English Farmer.

We are permitted to take the following from a private letter from Mr. J. H. Stickney, Esq., now in England, to his father, Josiah Stickney, Esq., of Watertown. The former describes a visit to Mr. Thomas Crisp, of Butley Abbey, Suffolk, a farmer and breeder not unknown in America for his fine draft horses and swine. We saw several of his animals at the Show of the Royal Agricultural Society at Chester, and made an arrangement to visit his farm, but circumstances prevented. Mr. S. says:

Mr. Crisp occupies about five thousand acres of land, which is in separate farms, on each of which is a resident bailiff. He keeps about 3000 South Down sheep, few cattle, many horses (Suffolks) including several brood cart mares, one beautiful blood stallion three years old, and any quantity of pigs. He works a few pair of cattle of the Dutch breed. They are harnessed to the plough, cart or whatever they are to draw, exactly as we harness a horse—just the application of what I have long talked of. It always seemed absurd to use a yoke. They go by bit and rein and do their work very easily—no hooting, screaming or thrashing. In most cases horses are used entirely. On Mr. C.'s farm I did not see less than four teams in a field at any time—each consisting of a pair of horses or oxen—and his ploughing is not beyond six inches deep. He never requires more than two horses for breaking up. His land is mostly very light, sandy loam, and some of it is very poor. He manures quite heavily—I should judge about seven or eight cords per acre, or heavier than this for certain crops. In fact the land for every crop is prepared as a market gardener would prepare it. Much machinery is used—everything, almost, being done by horses and implements drawn by them.

A man to be a large farmer here—gentleman farmer, so called (and they are both gentlemen and farmers)—must have the requisites, which would have made him equally a gentleman merchant. He must know the principles and details of farming, as well as any of his men, but he works the brain rather than the hands, and exercises a general and constant supervision.

Mr. Crisp keeps five road horses for his own driving—all good ones. He is frequently riding from morning till evening. I asked him how many agricultural horses he kept. He replied that he did not know, but would soon miss one if gone. In three fields I noticed twenty horses and eight oxen at work, in two fields five teams each, and in a third four teams. He works only the Suffolk breed. He showed me five magnificent Suffolk stallions. A two-year-old colt was the finest of his age I ever saw. I don't wonder a man is inclined to spend money, if he has it, and taste withal, when such animals are shown him.

His black pigs are very fine, and seem to be taking the lead in this variety. Mr. C. breeds more of them than of the white. He has a good number of the latter, and from them I have selected a boar for you, now about ten months old. He is a very fine one and own brother to the one which took the prize at Chester. Mr. C. pursues a different course in breeding from that followed by many in our country. He prefers breeding stock of two and a half to six years old to that of less age. The progeny is stronger and more thrifty.

On Saturday morning Mr. Crisp took us to walk over his farms. We were on foot from nine o'clock in the morning to two in the afternoon, and I should judge must have walked at least ten miles, mostly over ploughed land. He pursues the four-shift system. In this mode of rotation every piece of land bears the same crop but once in four years. The difference between this and the five and six-shift is, that in the former there is but one crop of wheat, while in the latter there are two or more crops of that grain. Hence it requires far better land to carry the two last methods of rotation than the first. The four-shift is the general one of England—two others exceptional. Of the mode of culture practiced for different crops, I will speak on another occasion.—*Boston Cultivator*.

Be sure and examine your cattle at this season, and if you find vermin in their coat, sprinkle sand and ashes well over them.



## NEW ADVERTISEMENTS.

WM. ADAMS, Detroit, ..... Trees and Plants.  
Bloss & Co., Detroit, ..... Seed wanted.  
G. YOUNG & PINNEY, Plymouth, Peach Trees.  
do do do Tobacco Seed.  
WHEELER, MELICK & Co.,  
Albany, N. Y., ..... Agricultural Machines.

## ANSWERS TO CORRESPONDENTS.

Richard Mack, New Casco.—Your corn has been sent by express.  
J. F. Flint.—Have sent the corn, the Dietyra, and other seeds as you directed.  
R. R. E. Romeo.—The question is whether the horse referred to is a blood horse. What is the pedigree of Berkshire Boy? What horse was his sire and of what stock was his dam? It would do to pronounce a horse "blood or thoroughbred" unless it is proved satisfactorily, according to the rules of breeders. Again in the official list of premiums published by the N. Y. State Agricultural Society, the award referred to could not be found. In whose name was the entry made, and what was the name of the colt? A premium thoroughbred three years old ought to be worth \$1,000 as a stock horse, at the least, judging of horses as they are sold for breeding purposes.  
Young Farmer, Lenawee.—As soon as the wheat shows it has begun to grow, plaster may be sown, at the rate of a bushel per acre. The drier the land the better the effect. Now, any time before the first of April, will answer. Plaster want make up for poor seed, and general bad treatment of land.

## MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, MARCH 19, 1859.

## The Resignation of the President of the Agricultural College.

The Lansing Republican announces the resignation of J. R. Williams, President of the Agricultural College in the following very just terms:

Hon. JOSEPH R. WILLIAMS has tendered his resignation to the Board of Education, of the Presidency of the Agricultural College. This step, made necessary by private interests, cannot but be regretted by the State. The high personal character of President Williams, his earnestness in the cause of agricultural education, and his scholastic endowments, made him for that position, one man among a thousand. His whole-souled devotion to the general subject of reform in respect to the union of manual labor with educational advancement, and especially his efficient agency in the passage of the Agricultural Land Bill, had made him well known to every friend of this cause throughout the Union. The efforts of Mr. Williams have been unsparingly given to the advancement of the best interests of our State Institution since his appointment, and if they have been less successful than he could wish, that result is plainly attributable to combined agencies, within and without, at work against him.

## Wool Talk.

We note that a great many papers quote some suggestions from the New York Tribune relative to selling wool on the backs of the sheep, or before it is shorn. These suggestions are esteemed very wise, and very sagacious; but we should like to know what they amount to. We do not believe that the New York Tribune reporter, or any other reporter, who knows anything about wool, would forbid any man from agreeing to accept a good price for his wool off or on the back of the sheep. If we had a thousand head of pure blood Spanish merinos on the hills of any part of Michigan at the present time, and every fleece were sure to weigh six pounds when clipped, and a stranger, a speculator, or agent for a manufacturer came along and offered us 60 cents a pound for the lot when clipped in June next, does any one think we would say nay, if he only made us sure of our pay? If they do, they are welcome to; but we should close the bargain forthwith, and we should be very careful, not only that all our sheep were shorn as close as though they had passed through the hands of a Detroit street broker, but also that every pound of wool grown by the animals went into the scales in fulfillment of the bargain.

There is not the least objection to selling the fleeces on the backs of the sheep—there is sometimes a huge out-cry about this speculator, and the other agent going through the country, and picking up lots on the sheep's backs, as if that were a great crime. Now there is no cruelty to be accounted for in such cases, for the article generally "sold" the worst is the operator, who finds that if he had waited for the market to open, and had gone in when the whole clip was being sent on for sale, he would have made better bargains for himself and his employees. Now we say, sell your wool by all means, either on or off the sheep's back; but only just take care that you get a good price for it, and when you have once got that, get enough paid down so that you will be sure there will be no backing out of the bargain. If any one offers you 60 cents a pound for a hundred fleeces grown on the backs of sheep that you

know to be not over half or three quarter blood merino, take it, and be sure and get \$100 advance to bind the bargain. The use of the money to help in putting in the spring crops this season, won't hurt a bit, and we will guarantee the sale of the wool correct. We are acquainted with a good many purchases of this kind made within the past six years, and in nine cases out of every dozen, it has not been the wool grower that has suffered the most.

We do not advise selling the fleece on the sheep's back, but it may be well to note that that mode of selling may be practiced to advantage as well as any other, and that the "talk" against it has no real foundation amongst practical men in the business. Of course if a farmer keeps himself in ignorance of the markets for fear of spending a dollar for his home papers, there are sharper always on hand to take advantage of his ignorance, and if he thus becomes the laughing stock of his neighbors and have to "bellow" a little because he gets hurt, who has he to blame but himself, and his own petty parsimony, which saves at the spigot, but spends at the bung.

## An Acknowledgment.

The reply which we gave to the invitation of the Rural New Yorker to "come to the centre" appears to have been such as to have knocked the challenger clean over the ropes, and outside of the lists in which he threw down that "glove," and as he seems to acknowledge his position by making as graceful a retreat as it was possible, we suppose we will have to let him go, with a gentle hint from the old proverb, which teaches strangers to "let sleeping dogs lie."

In this connection we have a word for our rather feeble friends of the Wool Grower. In their last number they take us to task, because we warned the sheep breeders and wool growers of Michigan not to put too much confidence in the reports of eastern papers relative to the wool crop, and markets, because from the experience they had had, it was evident that parties at a distance, not interested in what concerns us at the west, except to buy what we have for sale at the cheapest rates, would hardly be expected to have the same interest, as the editors and presses that were sustained at home, and were dependent solely on western interests for their support. These toadies of the Wool Grower who use their paper for the mere purpose of drawing custom to what they term their "Wool Depot," undertake in one of their columns to abuse us, and to defend certain eastern papers that we mentioned as not evincing last spring a knowledge of the wool markets, in their reports. To show the consistency on this point of the Messrs Goodale & Co., we quote what they themselves say in the same column, relative to eastern papers which have commented upon the wool market, and the extracts are taken from what they have to say on the late large wool sale at Boston.

First they observe:

"The above sale of Wool in Boston has been heralded over the Telegraph wires from one end of our land to the other. We think it may be safely set down as a fore-runner to lower prices—Where are the high prices which eastern papers and reporters have talked and quoted for two months?"

Will the Messrs Goodale & Co., explain, if this is not backing us up in all that we have said as to the knowledge of the markets evinced by eastern papers.

Again, they say,

"It looks as though the sale was smelling after the clip now on the carcass. It would be very difficult to get up an auction sale of Wool in the present active demand, without its becoming a true test of the market, excepting by previous agreement, and if this is a true test of the market, where are the 70 and 80 cent Wool, which the Independent and the Tribune have been talking about? Is Wool on the decline? What next?"

Here again is another stab at the eastern press, and its ignorance of the wool market at the east? When the MICHIGAN FARMER, whose editor has no Wool Depot to cater for, finds fault with eastern reports for not being as reliable as to western markets as those of the western press, it is all wrong; but the Wool Grower whose managers depend on their commissions from their Wool Depot, may find fault once in awhile when it don't hurt any body at the east, by way of exhibiting their consistency, and their independence, both of which seem to be of the same stamp! Will the Wool Grower please to give us a few more such exhibitions. We are delighted with them, as they prove all we have yet advanced! and seem to assure us that we have a strong ally sub rosa in our Cleveland contemporary.

## The University.

We have received a neat, well printed, well arranged pamphlet, entitled *The Catalogue of the Officers and Students of the University of Michigan for 1859*. But we find much information in this pamphlet in addition to the mere lists of the names of the students and the officers and faculty. The whole organization of the University is laid down in detail, and yet so succinctly that it

is easily referred to and as easily understood. The conditions of entrance, the several courses of instruction, with the facilities afforded to students to prepare themselves for professional training, are explained and laid down in the most satisfactory manner.

We notice that in this catalogue, it is announced that as soon as practicable "it is designed to organize a special department to be entitled 'the Agricultural course,' in which lectures will be given upon the theory of Agriculture as a science, and upon its special details. At present, lectures are given upon Botany, Zoology, Geology, Mineralogy, and Chemistry, in which the application of these sciences to Agriculture is shown; and in the Department of Practical Chemistry, students have an opportunity to study and engage in the analysis of soils, and other analyses, under the supervision of the Professor of Chemistry. It is believed that when this course comes into full operation, the collateral advantages of its connection with the University, no less than the thoroughness and fitness of the course itself, will commend it in a high degree to the attention of the agriculturists of the State."

FOR JACKSON.—Yesterday we were called upon to examine a six months Suffolk boar, purchased by the Hon. Michael Shoemaker, to send out to his farm at Jackson, from F. E. Eldred, Esq., of this city. This boar is as fine an animal of his age, of the breed, as we have seen any where, and we have no hesitation in commending him as a stock animal. His growth, as a six months pig, without grain, is good, without any sign of being forced. He is a broad, deep, well made up hog, with a good length of body, and a promise of size at the end of the next six months, that will make him a superior breeder. He should not have a grain of corn fed to him; if at any time he needs a little grain, let it be oats. Corn will be apt to fat him up, and render him unfit for practice at an early age.

## Literary News.

HOME HITS AND HINTS.—This is a volume of entertaining stories for fireside reading, and one which may be safely put into the hands of children, as it is full of healthy sentiment and quite free of the flashy love nonsense so common nowadays.

It is written by W. T. Coggeshall, published by Redford, New York, and for sale by Francis Raymond, Detroit.

Pinney's Pepper Bottle in this number of the FARMER is from its pages.

Dr. E. B. O'Callaghan, of Albany, compiler of the "Documentary History of New York," has in an advanced state of preparation a Bibliographical Catalogue of Bibles and parts thereof, printed in English in this country. This catalogue will include the editions of the various versions of the Scriptures, and come down to 1860.

N. P. Willis has written a new book, entitled "The Convalescent," which is to be published soon by Charles Scribner, of New York. It will doubtless contain many of those interesting letters published in the Home Journal that recount the observations of the author in a most pleasing manner.

Mr. J. T. Headley is now editing a manuscript work by Theophilus Roesse, the keeper of the Delevan House in Albany, containing the results of his twenty five years' experience as a farmer and horticulturist. Mr. Roesse is a German. He made a fortune out of a market garden. The famous "Peach Blow" potato was originated by him, from half a "merino" and half a "white" tied together and planted in sandy soil.

F. H. Underwood is said to have severed his connection with the firm of Phillips & Sampson, and with the Atlantic Monthly which he is reported to have originated. The severance don't seem to have "cut" the Atlantic in the least degree.

A life of Milton has been written by David Masson, a professor of literature at the London University, which is pronounced by the critics to be one of the most remarkable and excellent biographies of the age. He has long been one of the most talented contributors to the North British and British Quarterly Reviews. His works are in course of publication by Messrs. Gould & Lincoln of Boston.

The American Sunday School Union are about to issue quite a number of new works adapted to Sunday School Libraries. Their names are, Emblems from Eden, Evelyn Grey, Ellen Mordaunt, Wood Cutter of Lebanon, The Right Choice, Charles Grant, Fourteen Ways of Studying the Bible, Masters and Workmen, Ears of the Spiritual Harvest, The Little Guide of Adirigoole, Over the Sea, Sunday Sunshine, Exiles of Lucerna.

Sheldon & Co. of New York announce a volume entitled "Smooth Stones taken from Ancient Brooks," by the Rev. Mr. Spurgeon; also a book on the Holy war, entitled "The losing and taking Mansoul," a religious work.

James Miller of New York is getting out some of the old fashioned children's books, illustrated in modern style, such as Baron Munchausen, Robinson Crusoe, &c.

J. S. Redfield announces Paley's Moral Philosophy with annotations by Archbishop Whately, and a volume of sermons on the Love of God, by Charles Kingsley.

Dellaser & Proctor, are getting out "Dr. Franklin's autobiography," "Popular tales from the Norse," and Two journeys to Japan by Kenahan Cornwallis.

The Messrs. Longman & Co. of London have in press a volume entitled "Prairie Farming in America," by James Caird, a well known agricultural writer, and economist. Mr. Caird passed through Detroit last fall at the time of our State Fair.

Messrs. Ticknor & Fields of Boston announce as soon to be ready, a volume by De Quincey, and the Money King and other poems, by John G. Saxe, Goeth's correspondence with a child; two works by the celebrated Mrs. Jamieson, Mother-wells Poems, Percivals Poems, Dantes Inferno, a new edition, and a volume of Poems by Gerald Massey.

Willis P. Bayard, of New York, announces Carlyle's Life of Schiller, uniform with the same authors Frederick the Great.

Messrs. Dick & Fitzgerald announce a work entitled the History of Love among all nations, by the famous Lola Montez.

The Appletons are about to send out a series of children's books by a Mrs. Gatty, a work on the historical evidence of revealed religion, by the Rev. Geo. Rawlinson.

Drayson's Earth we inhabit, and Leslies' life of Sir Joshua Reynolds.

The Harpers have in press a volume of Travels in Spain, Grattan's Civilized America, a work that is stirring up American criticism, owing to its Trollopian pictures of life in Boston and elsewhere in the United States; South's Household Surgery, and Isaac Taylor's Logic in Theology.

The London Quarterly Review, first number for 1859, of Scott's republication has been received. The contents are very varied, but that which interests us the most is the excellent article upon "BREAD," in which the writer reviews the recent works on the subject, and treats it with great cleverness and knowledge.

THE METHODIST.—We have just received this work from the publishers, Messrs. Derby & Jackson, which we shall notice as soon as we have time to read it. It is for sale by M. Allen & Son of this city.

Received.—A circular of small fruits grown at the Nursery of Joshua Pierce, at Washington, D. C. He is cultivating the Catawissa Raspberry largely.

The second annual catalogue of plants sold by Edgar Sanders of Chicago, which presents a fine assortment of bedding out plants.

A very beautiful colored portrait of imported Grand Turk, the largest Shorthorn bull in the United States, has been received and which we esteem very highly. This portrait was sent us by Mr. Samuel Thorne the owner. We have had it framed and hung beside those of Grand Duke and Duchess 64th, sent to us some years since by Mr. Thorne's father.

A catalogue of the University of Michigan, which we have noticed in another column.

From Lawrence B. Valk, architect, N. Y., a very neat colored design of his new American style of country cottage and residence, of which he furnishes complete plans for \$40.00.

A catalogue of Shorthorn cattle to be sold by Harness Renick at auction, on Wednesday, June 15th, at Circleville, Ohio.

The publishers of the New American Cyclopaedia have issued a list of the contributors to the volume issued, or nearly ready, including one to five. The list exhibits a very wide range, and a prodigious amount of the best ability to be found on both sides of the Atlantic.

## Foreign News.

The arrival from Aspinwall, of the Star of the West, brings information of a revolution taking place in Chili, and the expectation of another breaking out in Peru.

By the steamship North Briton, we learn that Mr. Felix Belly, the projector of the canal across Nicaragua has sailed from France for Nicaragua, for the purpose of carrying out his project. He is accompanied by a staff of thirty three persons, and will take possession of the canal route on his arrival.

It is rumored that a marriage is projected between the Prince of Wales and the Princess Alexandra, a daughter of Prince Albert of Prussia. This would be connecting the two Kingdoms of England and Prussia still more closely by family alliance.

The French Emperor is still pushing forward his warlike preparations. Ten millions of rations of dried vegetables have recently been ordered for the use of the army. A second division of the army of Algiers had received orders to take up their line of march for France.

Prince Napoleon had also received a deputation of Italian residents at Paris, and his speech was such as to give "confirmation to their most ardent wishes."

The City of Washington has brought dates from Liverpool to the 2d of March.

The preparations for war continue with the greatest activity on the part of both Austria and France, and in consequence the stock market shows a decline in the prices of securities.

Lord Cowly, the British Plenipotentiary to bring about a peaceful solution of the difficulties between the two powers, has gone to Vienna and had an interview with the Emperor.

All that can be said on the subject of the war in prospect, is that it is unquestionable that Napoleon is firmly resolved upon it, and that he is taking every opportunity to render it popular with the French nation, before he commits himself fully by hostilities. The English attempt at mediation, will only be used as so much dust, to conceal the view of what is taking place, and will be found of no service in arresting the war, which seems to be fully determined upon.

The war fever is also reported to have extended to Germany, and we notice that some of the smaller powers of the confederation are ranging themselves on the side of Austria.

In England, the great topic of the day, is the Reform Bill, which is about to be introduced by D'Israeli. This bill will make a very great alteration in the representation in the House of Commons, and will extend the elective franchise to a very large number of persons who are now excluded. It proposes to confer the privilege of voting on members, to all persons who belong to the learned professions, and also to all parties who may have a certain amount of investments in the funds or deposits in saving or other banks.

Advices from India state that the kingdom of Oude has been completely subdued, and that the people are perfectly pacified.

## Scientific Intelligence.

Agricultural Patents for the week ending March 1859.—John C. Baker of Mechanicsburgh, Ohio, a new arrangement for seed planters.

T. D. Brown of Monticello, Ohio, an attachment to harness for supporting driving lines over the horse's rump. Charles Brownlie, Buffalo N. Y., an improvement in harvesters.

J. L. Chapman, of Kramandy, Ill., combination of frame for corn harvesters.

Geo. E. Chenoweth, Baltimore, Md., an improved step or standard for harvesters.

George H. Clark of East Washington, N. H., improvement in the making of hollow bars in bee hives.

Carlos and Darwin E. Eggleston, Beloit, Wisconsin, an improvement in seed sowing machines.

David P. Kinyon, Baritan, N. J., a combination by which the height of the cutting frame can be regulated without interfering with the driving machine.

T. C. Kneeland, Hartford, Wis., a simple and efficient arrangement of revolving horse rakes.

A. F. Ledbetter, Westminster, N. C., a new and efficient apple cutter and corer.

William H. Long, Lancaster, Pa., arrangement of levers on horse rakes.

Robert Niver, Yates, N. Y., a potato digger.

Daniel Banick, Interpore, Pa., improvement in harvesters.

Isaac Rulofson, Penn Yan N. Y., an arrangement of beam and fixtures of plows.

Amos G. Thompson of Bellville, Ohio, improved arrangement of spiral springs in corn planters.

A. Van Trump, Lancaster, Pa., arrangement of feed rollers to sugar cane mills.

Russel Warner, Brattleboro, Vt., a harvester, with horizontal rotary cutters, and machine going ahead of the team. This is something new.

Wm. H. White, Ganessville, N. Y., fixtures on horse rakes.

J. M. Whitney, Bolton, Mass., arrangement of hinged arms, and adjustable brace, standard on plows. The same also a new arrangement of teeth and fixtures on cultivators.

P. Stewart, New Lebanon, N. Y., a cast iron fence post, a new article of manufacture.

An invention named "Chisholm's deodorising process" has been announced in England whereby electric or galvanic agency may be applied to sewage or other noxious matters, and deprive them of their foul smell, and decompose the gasses deleterious to health, which abound in them.

The deepest coal-pit in Great Britain, and probably in the world, has, after twelve years' labor, been completed and opened at Dukinfield, Cheshire. The shaft of this pit is six hundred and eighty-six and a half yards deep, and the sinking of it cost nearly one hundred thousand pounds.

The Eland, a mighty specimen of the antelope genus from Africa has been on trial for some years in England for purposes of domestication, and recently a dinner was given in London at the Athenaeum Club, for the purpose of testing the qualities of the meat, at which Professor Owen was present. This distinguished authority thus pronounced on the quality of the Eland.

"The quality of Eland meat is the finest, closest, most tender, and most palatable of any meat. In taste the impression was of its sweetness and goodness, without any strongly marked speciality of flavor; it was compared with veal, with capon; finally the suggestion that it was mammalian meat with a soupçon of pleasant flavor was generally accepted. The portion of fat served with the joint differed from that of the deer, in not rapidly condensing into tallow, but retaining (like the best beef) its clear melting character. It was perfection as fat, and a sweet pudding made of it was extremely light and delicate. On the whole the committee rose with the conviction that a new and superior kind of meat had been added to the restricted choice from the mammalian class at present available in Europe."

## General News.

—We notice that an effort is about to be made to establish a woolen factory at Pontiac. This is an enterprise well worthy of all the "aid and comfort" that can be given it, and should be liberally dealt with by all our citizens.

—A new Yankee settlement has been formed near Black Lake Harbor, and all the graduation lands have been taken up. The Ottawa Clarion states that twenty seven families were added to it last week.

—A company of about thirty persons, started for Pike's Peak from Coldwater, last week. The company took teams, wagons all the other fixtures necessary. E. Butterworth, Esq., was the commanding officer.

—A well planned and executed burglary took place at Paw Paw last week. The burglars first went to the residence of the County Treasurer and stole his pantaloons from his room and house, whilst he was asleep; they then passed out, went to the office of the treasurer which they unlocked, entered, unlocked the safe and took away four hundred dollars in money, and some valuable papers. The whole affair evinces much professional skill.

—A new penny paper called the Press, has been started in Cincinnati by Henry Reed, formerly of the Cincinnati Commercial. It is worked on a Hoe lightning double cylinder press, driven by one of Ericsson's Caloric Engines. It has now been in operation something over a week, so that a fair opportunity has been had for testing its merits and advantages. After giving it this fair trial, the editor says its complete success is established, he congratulates his readers that in introducing to the West this wonderful motor, his expectations are more than realized. The Press is printed at the rate of three thousand impressions an hour, and the paper bears evidence that no better work can be done by hand power or the old steam engine. The expense of running it is only one cent and a half an hour, or 36 cents for 24 running hours!

—General Scott is still sojourning in New Orleans, trying the effect of warm weather upon his health. The General has experienced the happiest effects from his visit to the South, and will resume duties in Washington in a few weeks.

—The McMillen bequest of \$400,000 to the city of Cincinnati has been declared valid against the suit of his relatives, who will carry the case up to the United States Supreme Court.

—Mr. G. B. Smith, of Baltimore, predicts the appearance of locusts the coming spring, in Virginia Maryland, North Carolina, Tennessee, Georgia and Mississippi. They belong to the tribe of thirteen and seventeen years locusts.

—They had a dance the other night at Madison, Wis., for the benefit of the church. The Sentinel supposes it was a religious movement!

[Of course of the Shaker persuasion.]

—The statement made up at the U. S. Treasury Department shows that the circulation of the banks throughout the country in 1856 was nearly \$215,000,000; in 1857, \$150,000,000; and in 1858, \$193,833,000.

—John B. Gough, the celebrated temperance lecturer, after lecturing very successfully in Scotland has gone to England.

—There are now three Jews in the House of Commons of England.

—Rarely, the horse tamor, has had as much success in Belgium as in other countries. The wickedest animals in the army were treated by him with the utmost success.

—The cold winter was felt more in Texas than at the north this season. The Rio Grande was frozen so hard that teams crossed below Albuquerque.

—Mr. Wm. Kline has been appointed General Superintendent of the Michigan Southern R. R. Telegraph lines.



## The Household.

"She looketh well to the ways of her household, and eateth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

### THE LITTLE STREET SWEEPER.

Out through the drifted snow,  
Out ere the day doth glow  
Between his bars of gold, and o'er the earth doth fling  
His amber shafts, or ere the city's voices ring  
Along the path of trade:  
Out from a wretched shed,  
Creepeth a child, with weary look and sad.

Along a squalid street,  
With bare and bruised feet,  
Into a square begirt with dome and parapet,  
And church with fretted towers firm set  
Against the lofty sky:  
With bruised feet and bare,  
Through the dim morning air  
Stealth that child, with wet and sunken eye.

The Sun now leads the Day  
Upon his orient way,  
And touched with fire are Christian town and fane;  
And well-fed Life rushes with might and main,  
Joyous and proud and strong:  
Yet still beside the mart,  
With sad and sinking heart,  
Stealth that child her weary way along.

A path across the street,  
Where roads of traffic meet:  
And Trade and Fashion now do surge and sweep  
Across the jostling path her cold, thin fingers keep  
For horse and coach and dray:  
Pass, pass, pass; sweep, sweep, sweep;  
How hard it is to keep  
For heedless Thrift and Pride a way!

A piteous prayer and cry  
To every passer-by!  
And yet the gilded coach goes flashing on  
Flinging rich odors through the hurrying town,  
Hurrying so fast away:  
And still that cry is there—  
Spare me from hunger, spare,  
And from your gains and pride one moment stay.

There is a path that lies  
From earth into the skies:  
Across empyrean heights and pinnacles that glow  
With endless light that angel fingers sow—  
With pearl and gold do sow—  
And yet with garments mean  
The low-born NAZARENE,  
Opened that path for us by toil and shame and wo.

Ye, who that path would climb  
To heavenly gates sublime,  
To streets unswept whose domed towers do raise  
Their lofty heads, where choired anthems praise  
That CHILD of lowly birth;  
Think as ye cross the street,  
Think, as that cry ye meet,  
The path that ends in heaven begins on earth.

Knickerbocker Magazine.

### Early Times.

We give to-day a little sketch of early times in Washtenaw county, by Pioneer, who promises to favor us occasionally with more of the same nature.

Very few of the earliest pioneers of that county are now living; we mean by the earliest, those few who found their way to the banks of the Huron in the summer and fall of 1823. In the spring and summer of the next year emigrants began to flock in more plentifully, as it had become noised abroad that the dismal swamp surrounding Detroit was neither impenetrable nor endless, but that beyond it lay fertile plains and the pleasant valley of the Huron. The Chicago road was then opened too, which, in spite of its bottomless condition through the swamps, was at least a sort of general guide to emigration, and somewhat more direct in its course than the river or the Indian trail, the routes by which the first settlers found their way to Woodruff's Grove, now the city of Ypsilanti.

Aside from our correspondent, there are probably not more than one or two living, who recollect personally the incidents of the first wedding, but many of their descendants are scattered far and wide over the whole Western continent, and some of them to whom these lines will come may be put in mind of those early days, when we became familiar with the strange faces and stranger language of the Indians, and listened nightly to the dismal howling of the wolves and the answering growl and bark of the half frightened watch dog on the door step. They will remember the old fording place, and some of them, perhaps, the identical old horse who brought home the bride and baggage from Monroe, and who enjoyed the undisputed privilege of taking toll from the hollow stump grist mill where the pioneers pounded their corn for the morning Johnny cake and the evening mush. His range of pasture was as unlimited as "the West," his manger the public mill, and his stable the sunny side of a log cabin. We cannot remember his ultimate fate, whether he emigrated again, or whether his bones have mouldered away on the banks of the Huron. His memory should have been immortalized by monument and epitaph.

A few months ago, we visited the old grove, wandered up and down the banks of the river, and spent some time in the little graveyard now thickly overgrown with trees and wild flowers, where the first dead of the coun-

ty were buried. Improvement has made some changes of the old land-marks, still, as the village, now the city, was located further up the river, many features of the olden time remain as they were. The bluff, bold bank crowned with its little burial ground and growth of stately trees, seems to have been held sacred from all innovations. It is a pleasant feature in a pleasant landscape, and a great resort for walkers and romantic lovers. But the thickets of hazel brush were gone from the broad bottom lands, and in their place were acres of waving grass and long rows of corn, while on the low flat near the old ford, where groves of wild plum trees used to grow, now stands the mill where the paper is made on which our MICHIGAN FARMER is printed.

### The first Wedding of Washtenaw.

In the autumn of 1823, the present populous county of Washtenaw could boast of but one settlement, and that contained only four cabins, all made of logs but one, and that was made by driving stakes into the ground and weaving in marsh grass for the walls, the roof being thatched with the same material. In those times when the "oldest inhabitant" could date his residence there but a few short months, and when neither priest nor magistrate had as yet ventured among us, when roads and bridges were not, but bears and wolves were plenty, was it not strange that Cupid should have found us out and selected his victims there? But thus it was, that a couple who were weary of single blessedness fell desperately in love, and mutually agreed to live single no longer. The Territorial law then in force required that a license should be obtained before the marriage could be consummated, and for this purpose the lover set off, post haste, on foot, through the swampy woods to Detroit, thirty miles distant. On making application to the proper authorities what was his dismay at being told that the friends of the bride intended had forbidden the match, on the ground that a report had reached them that he was already claimed by a wife and children at the east. But, nothing daunted, he found there was one resort left, viz, to advertise in the public prints, or to post up notices in three of the most public places in the township, at least ten days previous to the nuptials. The latter alternative was soon acted upon by posting one notice on the hay-covered cabin, one on a tree near the fording place, and a third somewhere else, but report said they were all pulled down again before being seen by that prying personage, the public. The law was satisfied, however, and it only remained for them to find the proper person to perform the ceremony. With all these delays the autumn had passed, and the first day of the New Year, which had been chosen for the wedding day, was near at hand. But as all qualified magistrates and ministers in Wayne and Oakland counties had been forbidden to marry them, their only resort was to go to Monroe, about the same distance as Detroit, but much worse getting through the woods, for as yet it was a route which no traveller from our place had attempted.

Luckily for the lovers, a few inches of snow fell about Christmas, a native "jumper" was soon constructed, the old horse, the only one in the county, was secured, and the wedding party set off for Monroe. The groom and witness, with each an axe, took the lead, followed by the bride in the jumper, driving the old horse. The resolute men worked their way clearing the road for sixteen miles through the forest, and at night reached the first house on the route. From there they found a path to Smooth Rock, where they crossed the Huron river, and then followed an Indian trail to Monroe, which they reached the third night after leaving home. Here they were duly married, and the first thing to be thought of the next morning was, how they were to get home again. The South wind began to blow, the snow to melt, and the rain to fall before they had progressed many miles, and then the old horse tired out and refused to draw the jumper. Here was an emergency, but our heroes and heroine were equal to it, and as the snow disappeared they unhitched from the jumper, packed the blanket and baggage on the horse's back, the bride was mounted on top of that, and thus they plodded on till it became so dark they could no longer see the trail. They were obliged to camp the best way they could in the rain and darkness, for at that time those convenient little Lucifer matches were unknown, and to build a fire in the woods, with the rain pouring down and nothing but flint and jack-knife to get it from, was no easy matter. So in rain and darkness the night was spent, and the next day they reached and crossed the Huron again, and found a house where they obtained some refreshments.

After six days absence, towards the close of a drizzling, rainy day, they made their appearance in our settlement again. I saw them arrive. The old horse, bearing the harness,

baggage and bride, looked more forlorn, if possible, than the bride herself.

Though the marriage ceremony was performed in another county, this was called the first Washtenaw Wedding. PIONEER.

### Plain Hints on Personal Behavior.

A well-bred lady is always known by the perfect ease and tranquility of her manners. These points are to be carefully cultivated. Acquire, if possible, an easy confidence in speaking, so as never to appear abashed or confused, taking care, however, not to fall into the opposite error of forwardness or presumption. Persons moving in the highest circles of society seldom, or never, allow themselves to appear disturbed or vexed, whatever occurs to annoy them. Perhaps there may be an affectation of indifference in this; still, their conduct is worth admiring, for everything like fidgetiness or boisterousness of manner is disagreeable to all who witness it.

Everything like the following will of course be carefully avoided by a real lady in her personal behavior. Loose and harsh speaking; making noises in eating or drinking; leaning awkwardly when sitting; rattling with knives and forks at table; starting up suddenly, and going unceremoniously out of the room; tossing anything from you with affected contempt or indifference; taking anything without thanking the giver, standing in the way when there is merely room to pass; going before any one who is looking at a picture or any other object; pushing against any one without asking pardon for the unintentional rudeness; taking possession of a seat in a coach, or place of public meeting, which you are informed belongs to another; intruding your opinions where they are not wanted, or where they would give offence; leaving acquaintances in the street, or a private company, without bidding them good by, or at least making a bow to express a kindly farewell; slapping any one familiarly on the shoulder or arm; interrupting any one who is conversing with you; telling long and tiresome stories; whispering in company; making remarks on the dress of those about you, or upon things in the room; flatly contradicting any one, instead of saying, "I rather think it is otherwise," "I am afraid you are mistaken," &c.; acquiring a habit of saying "says she," "says he," "you know," "you understand," &c.—*Cin. Gazette.*

### Household Varieties.

#### A SEWING MACHINE DITTY.

Now, good folks, listen to me,  
And I will try and tell  
About my little sewer  
Who doeth all things well.  
'Tis not a weary woman,  
With dim and sunken eye,  
Who does my daily sewing  
With many a broken sigh.  
No poor, despairing widow  
Who labors for her bread,  
No broken-hearted mother  
Whose hopes are with the dead;  
But a cheerful little sewer  
Who labors all day long,  
With eye undimmed by sorrow  
And a merry happy song.

It gathers, bastes or stitches  
Whichever way you please,  
Nineteen hundred in a minute  
It can take with perfect ease.  
Now do you wish one like it?  
And would you know its maker?  
It is the best one in market,  
For 'tis made by GROVER & BAKER.

There is now residing in Wardsboro', Vt., a venerable couple—Captain John Rice and his wife—who were married Nov. 16, 1790, a period nearly approximating to seventy years, or dating back to the year succeeding the adoption of the Constitution of the United States, in 1789, or Washington's first visit to the New-England States as the first President under the same. Capt. Rice was born October 9, 1771, and his wife in 1769.

At the recent opening of Parliament, Queen Victoria wore a skirt of white satin with stripes of gold, a tiara of diamonds, and a necklace composed of the same precious stones, her mantle and train being of crimson velvet embroidered with gold.

Mrs. Stowe is about to visit Paris for the purpose of placing her children at school in that city. It is very extraordinary that with all the money spent and facilities afforded by the Massachusetts people for the promotion of the education of the young, that so many of them don't seem to appreciate the excellence of the method, but distinguished citizens seek France or Germany for improvement or education of their young.

The lady who started the First Sabbath School in Boston, which event took place in 1812, is now living in Medford, Mass., at the age of seventy. In her day she has heard the truths of the Gospel from Payson, Griffin, and their cotemporaries. Her first efforts were among the poor and vicious, and were not heralded by the pulpit or the press; but what great results have followed!

The New York police have just undertaken the arrest of street beggars. Those arrested tell some curious stories regarding their calling. A young girl, nine years of age, giving her name as Mary Ann Fox, says that from early childhood she has daily collected food to supply six grown persons living in 41st street.

Be Gentlemen at Home.—There are few families, we imagine, anywhere, in which love is not abused as furnishing the license for impoliteness.

A husband, father or brother will speak harsh words to those he loves best, and those who love him best, simply because the security of love and family pride keeps him from getting his head broken. It is a shame that a man will speak more impolite, at times, to his wife or sister, than he would to any other female. It is thus that the honest affections of a man's nature prove to be a weaker protection to a woman in the family circle than the restraints of society, and that a woman usually is indebted for the kindest politeness of life to those not belonging to her own household. Things ought not so to be. Kind words are circulating mediums between true gentlemen of society, and nothing can atone for the harsh language and disrespectful treatment too often indulged in between those bound together by God's own ties of blood, and the still more sacred bonds of conjugal love.

Biddy in Massachusetts.—The latest case of Biddyism is chronicled in the Greenfield Gazette. An Irish girl was despatched to a neighbor's with a note and directed to give it personally to the person addressed. On arrival, Biddy found that the neighbor had gone to Northampton, whither she wended her way, twelve miles on foot, and traversed the streets till she found the individual and delivered the note. She then started to return, stopping over night on the way with some friends, and reaching home next day, when she told her mistress that she could not go on any more such long errands.

Youth never comes back.—M. Salamancas is a great banker at Madrid, in Spain. He was recently invited to a modest dinner by the journalists of that city, he having been one of them himself in his younger days. He there made the following speech:

"Gentlemen," said he "about twenty five years from this time the old and threadbare cassock of Salamancas, then a student in the University of Grenada, might be among the oldest and most worn out cassocks of his comrades. When my education was completed I proceeded to Malaga, *gacillero* (journalist) of the *Advisad y Malagueno*. Then the love of gold took possession of my soul, and it was Madrid that I found the object of my adoration; but not without the loss of my juvenile illusion. Believe me, gentlemen, the man who can satisfy all his wishes has no enjoyment. Keep the way you have entered on, I advise you. Rothschild's celebrity will cease on the day of his death. Immortality can be earned, but not bought. Here are before you the busts of men who have gloriously cultivated liberal arts; their busts I have met with throughout the whole of Europe, but nowhere have I found a statue erected to the memory of a man who has devoted his life to making money. To-day I speak to you with my feelings of twenty two years, for in your company I have forgotten I am a banker, and only thought of my youth and days of gay humor."

An Organic Defect.—Last week we gave a pretty good hit on organ playing from the pen of Henry Ward Beecher, a report is circulated in the papers by a correspondent that explains the why and wherefore the organ don't "go it" to suit:

"Rumor has got into his head a new wrinkle on the matter of church music. He has found out that organs are too tame for the praise of God, and he goes in for a full band on Sundays. He has attended a musical concert and has become a convert to instrumental music. He delights in the blaring of the bassoon, the squeaking of the fife, the booming of the drum, the clashing of the cymbals, and the general crash of the whole united. And when the great cathedral is done—not Bishop John's, on Fifth street—the public ear may be stunned, and the general gaze fixed on the music of the sanctuary, led by a full military band, a *la* New Orleans and the Catholic Church. So I am told by one of the leading musicians of New York. Should this rumor not prove true, I shall not feel guilty of perjury in letting you know what floats on the wing of the wind."

Ben Perley Poore writes to the Boston Journal, that Mrs. Pickles is very like Piccolomini in personal appearance.

Universal Benevolence of Women.—The celebrated traveller Ledyard paid the following handsome tribute to the female sex: "I have observed," he says, "that women in all countries are civil, obliging, tender, and humane. I never addressed myself to them in the language of decency and friendship, without receiving a decent and friendly answer. With man it has often been otherwise. In wandering over the barren plains of inhospitable Denmark; through honest Sweden, and frozen Lapland; rude and churlish Finland; unprincipled Russia; and the wide spread regions of the wandering Tartar; if hungry, dry, cold, wet or sick, the women have ever been friendly, and uniformly so; and to add this virtue (so worthy the appellation of benevolence), these actions have been performed in so free and kind a manner, that if I was dry I drank the sweetest draught; and if hungry ate the choicest morsel with a double relish."

The Boston Female College, at the close of its annual term last week, conferred the degree of M. D. upon Almira Fifield, Valparaiso, Ind.; Mary Ann Harris, Troy, N. H.; Mary Ann Brown, Homer, Brimfield, Mass.; Elizabeth Taylor, Pitcher, N. Y., and Sarah A. Sheldon Wetherbee, Charlestown, Mass.

The New York correspondent of the Boston Transcript says that when Mrs. Kemble was asked her opinion of Mr. Beecher's style of oratory, she replied: "My father and brother studied for the church, and then went on the stage; Mr. Beecher seems adapted to the same change of vocation."

#### Water in Baker's Bread.

Bakers' bread, when fresh is whiter than home-made bread. This is induced by the addition to the bread of certain alkalies, such as sulphate of copper (blue vitriol) and sulphate of alumina (alum). These, when added to the dough in making, cause the flour to absorb a larger quantity of water, averaging an addition of about six per cent. Thus one cent's worth of blue vitriol will add six pounds of bread to the product of 100 pounds of flour, which will sell for forty cents. These alkalies are unhealthy, but the inducement to use them is very great. The bread sells better because it is very white, and the increased yield of bread will pay for the fuel used in baking. Hence the only remedy for this evil is a correct knowledge of the subject.—*Exchange.*

### Pinney's Pepper Bottle.

"We have a nice town here," said Mr. Pinney.

"A very pretty village," I replied. "You have known it for many years?"

"Yes, I came 'out West' from old Connecticut when it was all woods here; deer and wild turkeys were as plenty then as sheep and chickens now."

"You own large tracts of land; I presume you had money in your purse when you immigrated?"

"Not five dollars in the world," answered Mr. Pinney, as a shadow crossed his features, which seemed to me to be cast from an image of sorrow that dwelt in his heart.

I dare not ask leading questions, and there was a pause in our conversation.

I was riding with the richest man of township, in one of the northern counties of Ohio.

He had reined in his horse at a point near the village where he resided. While we conversed, we looked down upon a valley along which lengthened shadows were creeping and dying, while the tops of the forest trees near us were glowing in the evening sun's farewell smile.

When he had answered my question respecting his wealth at the time he became an immigrant, Mr. Pinney struck his horse with his whip, and we were whirled through the village. I was introduced to Mr. P.'s family at his farm house—for such his residence was, in fact, though it stood upon a village street. Behind it lay a large tract of land, cultivated under Mr. P.'s immediate superintendence.

Supper over—"Tea," as city ladies employ the word, is not taken at farm houses in the West—Mr. Pinney invited me to walk in the garden.

I was anxious to give the conversation a turn which would explain to me why Mr. P. had appeared sorrowful when I spoke of his settlement in the township; but, without special design at the moment, asked:

"Has property changed hands often in this neighborhood?"

"Quite so—quite so," answered Mr. P., with a sharp glance at my countenance.

"Such of the old settlers as are here yet are no doubt well off in the world. Are there many of them?" I ventured to inquire.

"About half a dozen—not more," replied my host.

I expressed some astonishment at this intelligence, and Mr. Pinney said:

"We'll take a seat and arrange our business now, but I wish to show you my farm and stock in the morning, and then I promise to give you an outline of the history of our village."

I had an intuition that this history would reveal the cause of the sorrow I had suspected in Mr. Pinney's heart, when I saw the shadow which passed over his countenance on alluding to his wealth, and I was grateful for the promise, but not glad of the postponement accompanying it. However, I consoled myself with the practical man's motto—"business before pleasure," and entered upon a calculation about values and incomes, which did not permit Mr. Pinney to show me to my chamber till a very late hour.

I was called, however, betimes in the morning, and immediately after breakfast was out on the farm with Mr. Pinney. When I had admired the manner of agriculture and the beauty of the stock, and been told the character of fruit in the orchard, Mr. Pinney led the way toward the farm house, and then said:

"I have not forgotten my promise; and if you still desire to know the history of our little town, I will give you what I consider most important."

I assured him that I was much interested in the promised sketch, and he began:

"My father was a merchant in old Connecticut, and I was a wild boy from 'the land of steady habits.' I left home when I was eighteen years of age, because of some restraints that had been imposed on me, which I considered tyrannical. I soon found that it was easier to endure restraints at home than be 'my own master' in the world, and I wanted to go back to my father's house, but my pride rebelled, and I joined a party of emigrants and came 'out West.' The emigrants settled here. They cut a road through the forest forty miles, before they found a spot that suited them—I was not accustomed to severe muscular labor, and I was the hunter of the expedition. I had many an adventure which delighted my romantic disposition. I became hardy and vigorous, and was soon able to help the squatters in clearing up their farms. We went twenty miles to mill—had no school for five years, and never heard a sermon preached (though there were many read,) till we had put three crops of grain into our log



barns. Then other settlers came in, and a Methodist preacher met those who were disposed to hear him, at one of the log cabins, once a month. Meantime, I had taken a squatter's daughter for a wife, and had a cabin and a few acres of ground, for which the government had been paid. I had been a hunter and farmer, wood-chopper and school teacher about six years, when I received word from Connecticut that a small stock of goods had been consigned to me at Pittsburg. I went out to the Ohio, and up to Pittsburg with an ox team, and when I returned I opened a store in a log cabin, on the spot where my son's store now stands, on the corner opposite my house. It would make a shabby appearance now-a-days, but it was a great affair in our settlement. I had a few groceries, nutmegs and spices, combs and nails, garden seeds and calicoes, thread and coarse cloth, candles and tobacco, and a very small stock of either, but there was no other store within a circle of fifteen miles, and I soon did, what I considered, a brisk trade.

"Some of the land had been low, and here and there were small marshes. When the country was cleared up, and it began to look like farming about here, there came a sickly season, and in almost every family some one had the fever and ague, and the doctor from the nearest town was getting everybody in his debt; but the ague was not eradicated. There had never been any whisky sold in the settlement, but now it was needed for bitters to keep off the chills, and when I sent for goods I ordered a barrel, and had a lot of drugs with it, and everybody got a bottle of bitters. When winter came, the ague pretty generally disappeared, but the fashion of taking bitters did not disappear with it.

"The pioneers had disheartening times, and too many of them endeavored to cheer their hearts with that which stole away their brain. I did not blame them much in those days, but I see now, sorrowfully, where I was to blame then. What think you?"

This was a strange question to me under the circumstances, but I answered it.

"Assuredly, Mr. Pinney, you have had experience enough in the world and opportunities of observation enough to convince you that such indulgences as you speak of, to express my thoughts in common parlance 'don't pay,' but after all, I always exercise compassion for those unfortunate men who never have a gleam of joy in their hearts, unless it is reflected from the fire which alcohol lights in the brain."

"Exactly my idea," said Mr. Pinney; "but while we are compassionate, we should never forget to instruct. That's where I went astray. Now let me tell you the consequence. Many men had lost their wives, many their children, some both, they had been pious men, but opportunities for religious instruction or encouragement were not frequent, and when they did offer, were generally uninviting, and with hard work and watching, men were worn out. I had kept in my store a bottle of whisky, impregnated with pepper, as a sort of guard against chills, and sometimes I offered a glass to my most particular friends. They grew fond of it, and my bottle was often empty. The popularity of my medicine increased, and I soon found myself selling large quantities of whisky and black pepper, and in a few months drunkenness had widely extended in our settlement; and did we stop it?"

Mr. Pinney looked at me as if expecting an answer, but I was silent, and he continued:

"No; farms were neglected, everybody was in debt, the farmers to the shoemaker, the tailor and the blacksmith, and all these to me; and when I saw the evil, I couldn't stop it, and in a few years I was virtually owner of one-third of the farms in the settlement, and all on account of ague bitters and my pepper bottle. Drunkards who owed me heavy notes for goods to support their families, died, and the farm was given me to pay the debt; and I felt myself doing a great wrong, but I was getting rich; and if I had undertaken it, I could not have changed the course of events. But a Yankee school-teacher came in to the settlement, and he hadn't been here a month till he called a meeting at the school-house for a lecture, and the school-house was crowded, for it was a great novelty, and to the astonishment of everybody, he exposed the liquor business among us, and showed me to be a living curse. Stones were thrown at him, and he was interrupted, and the people would have thrown him out of the school-house, but I forbade them, and declared that the school-master told the truth. Then the people listened attentively; and the next day I made a bonfire of my liquors, and there was no more whisky sold in our neighborhood till we had the canal built within a few miles of it; and now no man dare sell it in our village."

"What have you to regret, Mr. Pinney?" I inquired.

"You ask that but to quiet my mind," he replied. "I have no need of such quiet—Every foot of land which could go to friends or kindred here, I left unaffected by my mortgages; some have been paid, some have not; but when I die, the just heirs will find deeds in their names, and now all of the income of the property I hold in my name, except a respectable support for my family, is devoted to the improvement of our village, and to the promotion of religion and education among our people; and yet I am a most unhappy man. Pinney's Pepper Bottle left an influence here which two generations cannot outlive, and the conviction rests upon me with crushing force, that no man who has for one year been instrumental in making drunkenness in a neighborhood, can counteract the evil influence by twenty years of devotion to objects of charity and reform, with an ample fortune at his command; therefore, am I sorrowful whenever I think of what ague bitters did here. Better disease—better chills and fever and ultimate death on account of them, than poverty, and degradation and death from drunkenness. Am I not right?"

I could not answer Mr. Pinney in the affirmative, and then he said:

"Now, sir, I have never opened my heart to any man out of my family as I have done to you. I was led irresistibly into my confession, and it seems to me for good. In reparation for what evil I have done, I can do nothing more than I am doing, but to set my wrong example and the curse of our settlement before the world, you are at liberty, sir, to publish my confession."

### Household Recipes.

#### The Use of Vinegar in Stews.

On the continent of Europe vinegar is largely employed in the process of stewing. It acts by softening the fibres, and so rendering the meat more tender and digestible. The value of vinegar in economical cooking may be tested by the use of the following recipe:

Take some meat from the coarsest joints of a beef, such as the leg, shin, or sticking piece, cut it in slices of two or three ounces each, dip each in good vinegar, and then pack the whole in the steppan with onions, turnips, or other vegetables cut small, without water; cover it closely and let it stand by the side of the fire for six or eight hours; it will then be found to be thoroughly done, and to have yielded an abundance of gravy, being at the same time remarkably tender. The only precaution necessary is that the heat should never be suffered to approach the boiling point; or the meat, vegetables, and flavoring materials may be placed in an earthenware jar, which can be closely tied down, and then placed in a large saucepan of water, or very slow oven.

This mode of cooking is applicable to any kind of meat, and will be exceedingly economical, giving little trouble and furnishing a very nutritious, digestible, and delicious food. The acid of the vinegar is entirely dissipated during the process. The flavor of the vinegar stews is changed from that of the pure meat, yet poor, tough pieces become quite palatable.

### For our Young Friends.

#### Charade.

My first, a luxury, delicious and rare,  
Is served at table as part of your fare;  
In combat my second a chief part doth take,  
And is used whenever your toilet you make:  
My first in my whole is elaborately disposed,  
In delicate cans, hermetically closed.

J. W. E.

Plymouth, March 14th, 1886.

#### Miscellaneous Enigma.

I am composed of nineteen letters.  
My 16, 7, 4, is a beverage much liked by some.  
My 11, 12, 13, 14 is sweetness.  
My 15, 18, 8, 7, 10, 11, is sought for by many.  
My 17, 6, 5, 5, 12, 15, is a plant.  
My 1, 14, 5, 8, 10, 19, is to revolve.  
My 9, 16, 10, 11, 6, 8, is a man's name.  
My whole was an officer of the revolutionary war.

H. W. J.

Detroit.

Answer to Charade of last week—SHEATH.  
To Miscellaneous Enigma—COLONEL ETHEAN ALLEN. Answered by Loring G. Wooster, Co-runa.

**GROVER & BAKER'S**  
CELEBRATED  
**FAMILY SEWING MACHINES,**  
495 Broadway, New York.  
143 Jefferson Avenue, Detroit.  
58 West Fourth Street, Cincinnati.

A NEW STYLE—PRICE \$50.

This machine sews from two spools, as purchased from the store, requiring no rewinding of thread; it Hems, Fells, Gathers and Stitches in a superior style, finishing each seam by its own operation, without recourse to the hand-needle, as is required by other machines. It will do better and cheaper sewing than a seamstress can, even if she works for one cent an hour. Send for a Circular.

### 50,000 PAPERS

#### OF

#### FLOWER SEEDS.

A very large assortment of Flower Seeds, annual and perennial, of the choicest varieties, put up in papers, with printed descriptions, for sale at five cents each, or at fifty cents per dozen papers. Catalogues furnished free. Orders, accompanied with the cash, for one dozen, or more papers selected by the purchaser will be forwarded by mail, postage prepaid.

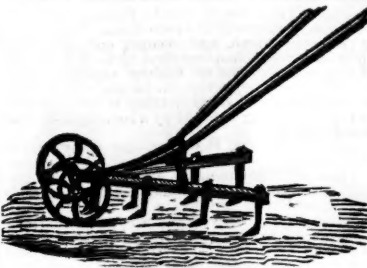
M. T. GARDNER & CO., Seedsmen,  
166 Woodward Avenue, Detroit.  
February 24, 1886. 9-5w

**PEACH TREES.** A few thousand good two year old trees for sale by G. YOUNG & PINNEY.  
18-4w Plymouth, Mich.

**TOBACCO SEED.** A small quantity of the Connecticut Seed Leaf variety for sale, 40 cts per oz., including postage.  
G. YOUNG & PINNEY.  
18-4w Plymouth, Mich.

### THE IMPLEMENT FOR GARDENS.

#### THE HAND SCARIFIER.



PRICE \$3.50.

WE offer for sale the Hand Scarifier, the most desirable and useful implement for gardens, of any that has been invented, and the most perfect labor saver. Read the testimony of those who have tried it last season:

ROCHESTER, OAKLAND, CO., MICH., FEBY., 1886.

MESSES. BLOSS & ADAMS:—You cannot recommend too highly your Hand Scarifier. It is an invaluable machine for cultivating all root crops sown in drills. It works easy, a boy of 12 years old can use it and do more work than five men can with hoes in the same time. It pulverizes the surface of the ground and kills all the weeds. I have used the last season and speak from experience. A person having a quarter of an acre of garden to cultivate should not be without one and no farmer or gardener after using one a single hour would be without one for four times its cost.

W. JENNINGS.

ROCHESTER, OAKLAND, CO., MICH., FEBY., 1886.

MESSES. BLOSS & ADAMS:—In answer to your inquiry, "How we like the Hand Scarifier," we reply that we are highly pleased with it. It is the greatest labor saving machine for its cost that we have ever used, or seen. For all root crops sown in drills it is invaluable. One man with this machine can do more work in one day than five men with hoes, and do it better. We have used it two seasons and would rather pay twenty dollars for one than do without it.

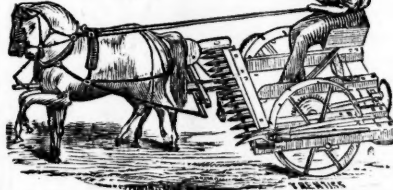
Yours respectfully,  
U. ADAMS.  
JULIEN ADAMS.  
These implements are for sale, by the subscribers at their seed store,  
No. 22 Monroe Avenue, Detroit.

### THE GREAT PREMIUM MOWER.

#### THE AULTMAN AND MILLER

#### MOWING MACHINE.

#### BUCKEYE MOWER.



PATENTED BY C. AULTMAN & L. MILLER.

To which was awarded the First Premium,  
a Gold Medal and Diploma, at the  
Great National Trial at  
Syracuse, N. Y.,  
July, 1885.

MANUFACTURED BY  
C. AULTMAN & CO.,  
Canton, Stark County, Ohio.

After toiling and experimenting for many years, we have finally succeeded in getting up a machine that is perfectly adapted to cut both grain and grass. The public are already aware that we have been manufacturing a Mowing Machine that has been unrivaled in any market. But the Farmer wants a machine that will cut both grain and grass, provided he can get a combined machine that will mow as well as a machine made expressly for mowing; and reap as well as a machine made expressly for reaping. This we furnish in our New Machine.

First.—We have a perfect Mower, having several advantages over all other Mowers, and no disadvantages, which will be readily seen by examining some of its points of excellence.

Second.—We have a perfect Reaper, which has all the advantages of a single machine, and the only true way of delivering the grain at the side of the machine.

In having two cutters bar and platform for cutting grain, independent of the Mower, so that in changing the Mower into a Reaper, we just uncouple the cutter bar at the hinge and couple the Reaper platform which renders the machine complete for cutting grain.

In having two cutters bar and platform for cutting grain, independent of the Mower, so that in changing the Mower into a Reaper, we just uncouple the cutter bar at the hinge and couple the Reaper platform which renders the machine complete for cutting grain.

The following are some of its points of excellence as a Mower:—

- 1st. It has not one pound of side draft.
- 2d. It has no more weight on the tongue, or horse's neck, than a wagon.
- 3d. Its draft is only 275 pounds—so reported by the Committee at the Ohio State Trial, 1887.
- 4th. It runs on two wheels which serve as drivers.
- 5th. It has an adjustable cutter bar and accommodates itself to an uneven surface of the ground.
- 6th. The cutter bar is in front of the driving wheels and does not rest in the rear. Thus enabling the driver to see the operation of the cutters, without interfering with his driving. Also, avoiding all danger of falling into the knives.
- 7th. The driving wheels have no cogs on them, but drive the gearing by means of pulleys and ratchets.
- 8th. By means of these pulleys and ratchets, the knives cease to vibrate in backing the machine.
- 9th. The driver, while in his seat, can see every bolt, box, and all the gearing while the machine is in motion.
- 10th. The gears are all permanently arranged in the center of the frame, distant from the driving wheels, thus avoiding all tendency of its being clogged up with mud or dirt thrown up by the drivers.
- 11th. The cutter bar being attached to the machine by means of a chain can be folded up on top of the platform without removing the connecting rod, knife or track cleaner.
- 12th. The pulleys on the driving wheels can readily be thrown out of gear, and by folding the cutter bar as above stated, renders the machine as portable as a common cart.
- 13th. There is a wheel on the shoe next the gearing in front of the cutter bar, thus avoiding all tendency of clogging at the rear shoe, in passing over cut grass.
- 14th. The off shoe is only 2 1/2 inches wide, and the last knife cuts no more than any other, therefore leaving no ridge or high stubble at the end of each swath.
- 15th. The cutter bar can be raised or lowered by means of an adjustable steel spring bolt at off end, and a slot in the near shoe where the wheel is attached.
- 16th. There are no nuts or screws at the connecting rod, which are always liable to cause more or less trouble by jerking loose, but use a gib with a spring pull and a ratchet key, thereby avoiding all possible chance of shaking loose.

Points of excellence as a Reaper:—

- 1st. It has all the advantages that the Mower has in the gearing, connecting rod, and draft for the horse.
- 2d. The grain is delivered at the side, so that a whole field can be cut without taking any of it up.
- 3d. The driver's seat is the same as on the Mower, affording him a free view of the operations of the machine.
- 4th. The raker stands at the rear of the platform, which is the best position for delivering the grain.
- 5th. The raker with one motion, throws the grain to the side, then delivers it in the rear; thus avoiding the difficulty of dragging the grain from one gavel to another.
- 6th. The platform can readily be raised or lowered to suit all kinds of grain or ground, by means of two screws, at rear side, and slot at off side, when off platform.
- N. STEELE is the travelling agent, and is now soliciting orders in this State.
- All letters of inquiry, or requesting further information may be addressed to  
Dexter, General Agent, or  
BLOSS & CO., Special Agents, Detroit.

### LAWTON BLACKBERRIES.

#### PRICES REDUCED.

Lawton Blackberries warranted genuine, good plants \$10 per 100, \$90 per 1000, packed.

Austrian Pine and Norway Spruce, 1 foot, Scotch Fir, 8 to 10 inches, all 1 year transplanted \$50 per 1000, \$140 for 8000.

Hooker, Wilson's Albany and Peabody's seedling straw-berries 50 cts per doz., \$2 per 100.

Triumph de Gand, and Trollope's Victoria 50 cts. per doz \$2 per 100, all other leading sorts \$1 per 100.

Cherries—Duke, Morello, Heart and Biggarrean 2 years from bud, extra fine, \$15 per 100.

Dwarf Cherries, 1 year, fine, principally Dukes and Morellos \$15 per 100.

Rebecca Grape Vines \$1.25 each.  
Delaware Grape Vines \$2.00 each.

Houghton Gooseberries, strong plants, \$40 per 1000.  
Catawba Grape Vines, 1 year selected \$30 per 1000.

Manetti Rose Stocks, strong, \$20 per 1000.  
Best No. 1 imported Pear stocks \$20 per 1000.

Angers Quince stocks with fine cuttings, \$5 per 1000.  
Hybrid Perpetual Roses, \$20 per 100.

Brinckle's Orange Raspberry \$7 per 100.  
All other nursery stock equally low.

Send a stamp and get a catalogue.  
A. FAHNESTOCK & SONS,  
Toledo, Ohio. 9-4w

### SEEDS! SEEDS!!

FIELD, GARDEN AND FLOWER SEEDS!!

WE ARE now fully supplied with one of the largest and most complete stock of Garden, Flower and Field Seeds ever offered to the Western Public. Our stock has been made up with much care from the best seed gardens of America and Europe. A large share are home-grown seeds, being grown under our own inspection, and which we can recommend as true to name and of the best quality.

Among our assortment of Seeds may be found over 150 VARIETIES OF FLOWER SEEDS;  
80 do do GARDEN SEEDS;  
HUNGARIAN GLASS SEED;  
CHINESE SUGAR CANE AND IMPHIE SEED, &c.

From a long acquaintance with the trade, we feel confident no one can offer better inducements to those desiring seeds.

Those who design to emigrate to Kansas and Pike's Peak would do well to take with them a box of fresh Garden Seeds.

We also keep constantly on hand a full assortment of IMPLEMENTS AND MACHINES

Suited to the Field, Garden, Orchard and Household. We are fully prepared to supply the trade on the most liberal terms.

Full Catalogues furnished gratis on application; if by mail inclose a stamp. Address  
H. D. EMERY & CO.,  
204 Lake Street, Chicago, Ill.

9-3w

### NEW ROCHELLE BLACKBERRY.

AS I wish to plant out myself the coming Spring, I will sell a few hundred to those who want them, not to sell, but to supply their own tables with fruit, at the rate of one dollar a dozen. A dozen plants will furnish a daily supply for the table for several weeks.

CHAS. BETTS,  
Burr Oak, Mich. 9-4w

### FRUIT AND ORNAMENTAL TREES

For Spring of 1889.

ELLWANGER & BARRY beg to leave to inform

Patrons, Nurserymen and Dealers in Trees, that they have still on hand to offer for Spring Planting, a large stock of the following named articles of superior quality in all respects:

**Fruit Department.**  
STANDARD PEARS, on Pear Stock, 2 and 3 yrs. from bud. DWARF and PYRAMID PEARS on Quince, 2 and 3 years from bud.

DWARF and PYRAMID APPLES on Paradise and Doucin, 1, 2, 3 and 4 years from bud.

STANDARD CHERRIES on Mazzard stocks, 2 years from bud. DWARF and PYRAMID CHERRIES on Mahaleb stocks, 1 and 2 years from bud.

APPLE QUINCES grafted, 2 and 3 years from graft. ENGLISH WALNUTS, Butternuts, Spanish Chestnuts, Filberts, &c.

HARDY GRAPES, including Isabella, Catawba, Clinton, Concord, Diana, Rebecca, Monticelli, and other new varieties.

FOREIGN GRAPES, for Vineries, all the most esteemed varieties, well ripened plants, in pots, 1, 2, and 3 years old from the eye.

BLACKBERRIES, New Rochelle, or Lawton and Dorchester.

GOOSEBERRIES, the American Seedling and large English varieties.

STRAWBERRIES, upwards of 60 varieties, including all the best American and Foreign varieties.

CURRANTS, Red Dutch, Victoria, White Grape, Black Naples, Black English, &c., &c.

RHUBARB, Myatts, Linneus, Victoria, Prince Albert, &c. ASPARAGUS, strong Roots.

**Stocks.**  
MAZZARD Cherry Seedlings.  
MAHALEB do do

### Ornamental Department.

DECIDUOUS STANDARD LAWN TREES.

DECIDUOUS WEeping " "

EVERGREEN TREES, embracing an immense stock of Norway Spruce, from 6 inches to 6 feet. Also, rare California Evergreens, &c. See special advertisement.

FLOWERING SHRUBS, all the most desirable, a very large stock.

CLIMBING SHRUBS of all sorts.

ROSES—the largest stock in the country of all the best sorts, both on the Manetti stock and on their own roots. See Catalogue.

HEBES—A superb assortment of more than 70 varieties.

DAPHNODENDRA—Over 100 of the most beautiful varieties, including the latest novelties.

PHLOXES, an unrivaled assortment, embracing all the classes.

DIELYTRA SPECTABILIS, the most charming hardy border plant in cultivation—over 10,000 plants.

CHRYSANTHEMUMS, both large and pomponne varieties, the newest and best.

CARNATIONS and PICOTEES, a fine collection.

DELPHINIUM HENDERSONI—Magnificent and other beautiful sorts. Besides all the most desirable hardy border plants grown. See Descriptive Catalogue No. 3.

**Green-House and Bedding Plants.**  
All the most useful and popular plants such as *Fuschia*, *Geraniums*, *Heliotropes*, *Verbenas*, *Pelargonias*, *Lantanas*, *Veronica*, *Hydrangeas*, *Bougainvilleas*, *Plumbagos*, &c., &c., grown extensively and supplied in quantities, or by the dozen, assorted, at low rates. See Catalogue No. 3.

**Summer and Autumn Blooming Bulbs.**  
A superb collection of the new *Gladioli*, and *Japan Lilies*, besides *Tulips*, *Tigridias*, &c.

We can say without boasting, that our present stock has never been surpassed in vigor, health, and beauty of growth, and we invite all parties interested to examine it and satisfy themselves.

Packing for distant parts executed in the most careful and skillful manner, and customers treated in all respects with fairness and liberality.

For full and detailed information respecting the stock, prices, terms, &c., we refer to the following catalogues which will be sent gratis, prepaid, to all who enclose one stamp for each:

No. 1—Descriptive Catalogue of Fruits.  
No. 2—Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c., &c.  
No. 3—Descriptive Catalogue of Dahlias, Green-House and Bedding Plants, &c.  
No. 4—Wholesale Catalogue for Nurserymen, Dealers and others who purchase in large quantities.

ELLWANGER & BARRY,  
10-4w Mount Hope Nurseries, Rochester, N. Y.

### SEEDS! SEEDS! SEEDS!

THE Subscribers have on hand and for sale at wholesale and retail, a large and complete assortment of Garden, Flower and Field Seeds, obtained from the most reliable sources, both in this country and Europe.

Of the growth of 1888, good and true to their marks. Farmers, gardeners and others in want of Seeds of almost any kind, can obtain from us those that will give entire satisfaction.

Catalogues may be had on application at our store, 166 Woodward Avenue, or by mail.

M. T. GARDNER & CO., Seedsmen.  
Detroit, Feb. 24, 1886. 9-5w

**LAWTON BLACKBERRIES FOR SALE**  
At the rate of \$2.00 per dozen, or \$10.00 per hundred by

HUBBARD & DAVIS,  
7-3m Fort Street, Detroit.

**MELONS.** The famous JAPAN APPLE PIE MELON seeds sent for thirty cents per dozen by

W. H. GARDNER,  
Sublette, Lee Co., Ill.

### 3,000 VERBENAS!!!

THE following varieties, and many others not enumerated, can be supplied during the season, forming an unrivaled collection:—

\*Charles Dickens, (Edmond's) Rosy lilac, dark centre large eye.

\*La Gondalier, Soft rosy crimson, fine truss and form. \*Lady Palmerston, (Edmond's) Delicate pale blue, large white centre, large truss.

\*King of Sardinia, (Edmond's), Deep crimson, dark centre, very large truss and flowers.

\*Black Prince, Very dark purple, large and fine. \*Mrs. Woodruff, Splendid scarlet, rivaling defiance.

\*Mrs. Holford, Large waxy, white truss, extra.

\*Imperatrice, Elizabeth, (Pulehella Monetta), a distinct species, with elegant lacinated foliage; color, violet rose, with pure white flakes down each side of the petals.

\*Brilliant de Vaise, Shaded crimson, large and fine. \*Madam Kien, Soft pink, slightly striped.

\*Mrs. H. Williams, Very fine white. \*Champion, Dark purple, large truss, fine.

\*Madame Viard, Light and dark pink, striped. \*Incomparable, Light and dark purple, striped.

\*Striped Eclipse, Striped pink, very fine. \*Queen of Purple, Fine dark purple.

\*Katie de Jour, White, large truss, excellent. \*Katie Defiance, Color light, pink centre, extra large bloom and truss.

\*Anacron, Very fine scarlet, distinct variety. \*Robinson's Defiance, Brilliant scarlet.



